

Educating the Outliers: A Study on the Effectiveness of an Alternative School

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ABSTRACT

This dissertation examines the effects of an alternative secondary school on at-risk students (i.e., students who persistently fail in the regular schools), as compared to regular secondary school effects on both at-risk and regular (i.e., not at-risk) students. The objective is to extend knowledge on the success of alternative schools, on which very little empirical research exists. School effects are measured through longitudinal gains in multiple indicators including grades, attendance, tardiness, and referrals for behavior problems, suspensions, and dropouts. All are factors that directly or indirectly reflect student achievement. The results suggest that, despite a few exceptions (such as referrals), the at-risk students at the alternative school “gain” more than their at-risk counterparts in the regular school setting. Also, while the at-risk group in the alternative school is not as successful as regular students in the regular school setting, they compare more favorably to this regular group than do the at-risk group in the regular high school setting. Implications for research and policy are discussed.

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CHAPTER 1

INTRODUCTION

Is alternative education effective? Does an alternative school provide a better opportunity for at-risk students than the regular school setting? Can one expect that an at-risk student will improve if they transfer to an alternative school rather than remain in the regular setting? What measurable student based outcomes will be positively affected by an alternative school?

This dissertation analyzes the effects of one alternative secondary school on at-risk students as compared to regular secondary school effects on both at-risk and regular students. Alternative schools exist to educate students who persistently fail in the regular school setting. This study analyzes the effect of one alternative school on student academics, behavior and discipline. The effect is measured by comparing grade point average, failing grades, attendance, tardies, discipline referrals, in school suspensions and dropout status prior to attending the alternative school against the same data after they have completed two quarters in the alternative school setting.

1.1 Relevance of the Study

Today, more than ever, policy makers require that schools demonstrate effectiveness. The demands of No Child Left Behind and the constraints of public school budgets force careful analysis of every educational decision. Exaggerated beyond this trend in education, an alternative school must contribute something of value that is not available within the structure of a regular school. More importantly, the decision to create or maintain an alternative school will be based on the effect that the school has on the at-risk population of students it serves.

Alternative Schools are often viewed as a means to improve educational outcomes of youth, even though little research exists on whether alternative schools accomplish this. Research generalizations are limited by the fact that current research studies tend toward small case studies, interviews, or surveys and few measure achievement outcomes. A review of the current literature on student outcomes yields

mixed and somewhat inconclusive results. As shown in Table 2, many studies find positive social, emotional, and personal effects of alternative schools on students. Harter (1990) showed gains in pro-social values, motivation, and self-esteem. Some studies shows that alternative schools were effective in increasing student attendance (Gettys & Wheelock, 2004) and decreasing discipline problems (Davis, 1994). Kaplan (1999) determined that students felt that they were learning more in the alternative program than the regular program. Many researchers have expressed concerns about inadequate academic support to enable students to be academically prepared (Kraemer & Ruzzi, 2001, Lehr & Lang, 2003, Foley & Pang, 2006). According to Munoz, “Alternative education, while based on good intentions, does not provide students with academic skills and critical thinking ability necessary to mitigate barriers to educational equity and social mobility (2004).” Current analysis of alternative school effectiveness is limited by the small number of studies, small sample sizes, lack of qualitative, empirical data, and flaws of existing data measures.

Insert Table 2 about here

Alternative Education presents some unique challenges to educational research. First of all, the varied and often changing expectations for alternative schools can make it difficult to determine indicators of success or failure. The existence and purpose of alternative schools is directly connected to the initiatives occurring in regular education. When the educational focus is on drop-out prevention, alternative schools have provided an alternative, supportive environment for the disenfranchised students. When education initiatives have focused on safety, alternative schools provide a means to remove students from the regular education program. Schools, and therefore alternative schools, are expected to meet the needs of an ever more diverse and needy student population. De La Ossa, 2005, states “The purpose of schools is to meet the needs of students.” Nationally, the goal of education today is student

achievement as measured by end of the year standardized assessments. NCLB holds schools accountable for the achievement of every student and does so while holding schools equally accountable for dropouts. The challenge of dropout prevention has been a traditional role for alternative schools and has caused them to expand with 10,300 documented alternative schools in the United States that serve 646,500 students (Carver, 2010). Goals for alternative schools can include any combination of academic gains, improved behavior and attendance, dropout prevention and in some settings, separation from the regular school. NCLB does not differentiate alternative schools from regular schools and therefore, demands academic achievement and dropout prevention simultaneously.

Secondly, many common assessment models do not inform the analysis of alternative schools given the challenges of at-risk students. Assessment models must account for the status of the student upon entry in the program if they intend to measure the alternative school effect. Conversely, NCLB is a threshold measure and does not differentiate between students who enter the program at different levels. The essence of today's alternative school ideology is consistent with contemporary idealism of leaving no child behind; however, the evaluation model of NCLB does not measure the effectiveness of alternative schools.

Lastly, the small size and individualized nature of alternative education makes quantitative data collection especially difficult. Alternative schools, by their very definition, address each student's needs in an individualized manner. The treatment provided will differ for each student and frequently the assessment would need to be similarly individualized.

This study is a longitudinal quantitative analysis of the effect of one secondary alternative school on at-risk students as compared to at-risk and regular students attending a regular secondary school. Schools can no longer ignore the assessment challenges inherent in alternative schools and must seek effective tools to assess the performance of those students who do not fit the box we call school. Improving academic, behavior and attendance outcomes is the goals of all schools and the focus of this alternative school. The methods used address the measurement flaws of methods such as NCLB by using

a growth model measurement. This study targets the very group that does not fit the box of traditional education: the outliers.

CHAPTER 2

REVIEW OF LITERATURE

2.1 Education of At-Risk Youth

“Outlier” is a statistical term that refers to data that is “numerically distant” from the rest of the data. The outliers are usually a disconnected group in research. NCLB outlier is a term that could be applied to at-risk students. Many of these students are found in alternative schools: they may be low or high ability, but all have multiple barriers to proficiency and many fall far below proficiency.

Schools that serve at-risk students find themselves in a hopeless predicament caught between a mission of serving the most needy students and expectations of proficiency that seem far out of reach. Is it important to assess at-risk students and their schools? Can a onetime test assess at-risk students or their schools? Is there a better way? Assessing alternative schools challenges traditional evaluation processes. NCLB outlier is a term that could be applied to alternative schools, as well as students. The NCLB evaluation model hinders, rather than helps, students and their schools become proficient. Educators have known historically that one test can never provide a truly accurate picture of the complexity of learning. McCall, 2004, and Barton, 2008, call for an evaluation model that holds schools accountable for what happens in school and measures that compare what a student knows at the beginning of the year to what they have gained by the end of the year. Barton finds a low correlation between schools that are proficient as measured by end of year testing and schools that have demonstrated gains from the beginning of the year to the end. Making educational assessment meaningful requires much more than NCLB has to offer. An effective evaluation model is needed that will provide schools and their students clarity on a student’s current achievement level and measure student growth over time.

2.2 The Growth Model

This study will utilize a growth model to show individual student growth as compared to the current proficiency standard set up by NCLB to assess student and alternative school success. A growth

model is a longitudinal model that seeks to identify individual student growth over time (McCaffrey, Lockwood, Koretz, & Hamilson 2003, Goe, 2008). A growth model attempts to measure the change between two longitudinal data points and accounts for the status of the student when they enter the school. If we believe all students can learn, we must have a means to measure their learning. One criterion for measurement must be that it is effective for all students. NCLB claims to “leave no child behind”, however, this study hypothesizes that it does exactly that. The problems of the NCLB model as it relates to, low-performing students and alternative schools will be described, and an evaluation model that will provide clarity on a student’s current achievement level and measure student growth over time will be introduced. Ineffective schools should be improved or eliminated. This study will provide a model to identify effective from ineffective programs and schools.

NCLB assesses schools and districts by determining the percent of students who reach or surpass a proficiency standard. It is a threshold model. The threshold model designates one score as the threshold separating proficient from “not proficient”. This model does not consider multiple types of data or individual growth. A student who falls far below expectations at the beginning of the year may show unbelievable gains by the end of the year and yet not meet proficiency. The student and the school are labeled as failures. Many have criticized NCLB, yet even its greatest critics tend to see the value of the increased focus on data. The focus has caused us to review what we do and how we do it. Data can help us analyze our practices and influence our actions. Evaluation is essential if our goal is effective schools and successful students.

2.3 At-Risk Students

At-risk students can face many different challenges. Factors that put students at-risk of failure can be out of the school’s control and out of a person’s or family’s control. Dropping out, failing grades, problem behaviors, family issues, and mental health concerns are all traits of at-risk students. These at-risk factors result in many students not fitting the box called school. Even so, it remains the responsibility

of the school to educate these students. Therefore, if we are to educate all students we must offer alternative means to accomplish the task.

Alternative schools exist in large part due to the failure of students in the regular school setting. Students who fail to attend school, get suspended or fail to respond to instructional opportunities continue to challenge educators. Due to NCLB, school districts are held accountable for these students. Students labeled at-risk can differ greatly from other at-risk peers. For the sake of this paper, an at-risk student is identified as one who has not been successful in the regular academic setting. At-risk students typically perform significantly below their peers academically. This failure to perform may be attributed to a wide range of individual challenges which may or may not reflect low ability or low achievement on the part of the student. Students may be challenged by social, emotional, mental health, physical health, family, poverty, alcohol & drugs, behavior, teen pregnancy, violence, community, and learning issues. Many at-risk students face multiple barriers to success. This population of students is easily found within the walls of alternative schools throughout the country.

2.4 Alternative education – description and purpose

The purpose and description of alternative education is simply answered with the question, “What does the school need to do in order for the student to be successful?” NECIS, 2002, defines an alternative education as, “a public elementary and secondary education that addresses needs of students that typically cannot be met in a regular school, provides nontraditional education, serves as an adjunct to a regular school, or falls outside the categories of regular, special education or vocational education.” Alternative schools have served education for nearly 50 years as a safety net for students. As regular schools balance competing goals of effectiveness and efficiency, they have become more bureaucratic and the vestiges of small, personal, community schools have been modernized and politicized out. At the same time, the role of the school in society has expanded to include many social emotional supports for students. Alternative schools are typically small schools where relationships are pivotal in meeting the socio-emotional and educational needs of students.

Alternative schools have been in existence since the 1960's. Historically, alternative schools have adapted to meet changing student and community needs. They are, in effect, a product of identified needs. Most alternative school students are behind in credits, have been retained, or have dropped out. Many students are challenged by poverty, mental health, and family issues. The population served represents most of the challenges of humanity in general but at a higher concentration than would typically be found in a regular school. Most are small. Alternative schools typically serve 30 to 100 students or between 1 and 10% of the total student body. Their small size leads to a familial supportive climate that enables individualization and greater flexibility in meeting the needs of each student.

Alternative Schools can be described as:

- ***Small, ranging in size 30-100 students*** (Arnové & Strout, 1980; Barr, 1981; Bryk & Thum, 1989; Morley, 1991; Natriello et al., 1990; Tobin & Sprague, 1999; Young 1990)
- ***Emphasizing one-on-one relationships between teachers and students*** (Arnové & Strout, 1980; Barr, 1981; Tobin & Sprague, 1999)
- ***Providing a supportive environment*** (Arnové & Strout, 1980; Bryk & Thum, 1989; Case, 1981; Tobin & Sprague, 1999; Young 1990)
- ***Providing differentiated instructions, academic support & relevancy to the student's future.*** (Arnové & Strout, 1980; Barr, 1981; Natriello et al., 1990)
- ***Allowing flexibility in structure*** (Barr, 1981; Gold & Mann, 1984; Natriello et al., 1990)

Adapted from - Lange, C. M. S., Sandra J. (2002). Alternative Education: A Brief History and Research Synthesis. National Association of State Directors of Special Education, Alexandria.

2.4 Alternative Education Demographics

Within the state of Missouri, alternative schools are typically considered satellites of regular schools. Therefore, there is no state data on alternative school programs. In fact, until 2009, the state did not even know how many alternative schools existed within the state. A recently formed state organization of alternative education conducted a survey collecting data on 200 alternative schools in the state. (Missouri Alternative Education Network, MAEN, 2010). Since then, MAEN has contacted every district and inquired about their alternative programs. Their follow-up survey collected data from 110 alternative schools in the state with many different variations on purpose, target population, and structure.

Surveys identified the major goal of most programs as addressing student's academic difficulties. Thirty-seven different types of services were cited but most frequently cited were: credit recovery, career counseling, life skills, and test-based acceleration. Most of the programs have been in operation over 10 years and most serve secondary students. The respondents noted costs per pupil ranging from \$4,500 to \$15,000, with student/teacher ratios typically falling from 7/1 to 13/1. Collecting demographic data is a first step in identifying and eventually assessing the effectiveness of alternative programs.

The existence of alternative schools speaks to the belief that schools must not leave any child behind; however, the lack of data on effectiveness questions whether alternative school students are yet "left behind". Alternative schools for students have been a part of the American education landscape for decades. There are over 10,000 alternative schools identified in the United States (source), found in 64% of all school districts, serving more than 500,000 students, and yet there is very little data on the effectiveness of alternative education. While many studies attest to the effectiveness of alternative schools, Kim & Taylor (2008) utilized a case study method to consider whether alternative schools offered equitable education and found them to be lacking.

Alternative schools share a common purpose of providing educational opportunities for students who have not been successful in the regular education program. Yet, the reasons students are not successful differ greatly. McCall (2003) categorizes alternative students into five groups: 1. behavioral dysfunction, 2. academic remediation, 3. social skills, 4. family disruption, and 5. absenteeism. Unfortunately, some alternative schools have as their sole purpose to remove problem students from the general student population (Conley, 2002). If the goal is removal, they are successful simply by existing to house students. When removal is the purpose, there are few expectations for high achievement and in fact the removal of the student is considered the success.

Students are referred to Alternative Schools for many reasons including: students transferred for fighting (61%), drugs & alcohol (57%), disruptive verbal behavior (57%), continual academic failure (57%), chronic truancy (53%), weapons-not firearm (51%), and firearm (42%). All the above reasons lead to a student population that are behind in credits have been retained or have previously dropped out.

The students who attend alternative schools are usually - -75% of them - - identified by the staff of the referring school. Those who refer and send students to alternative schools are likely to remember the challenges of the students they have referred which in turn affect their beliefs about the alternative school.

2.5 Legitimacy

Historically, alternative schools have suffered from many negative perceptions (bad kids, bad teachers, bad schools - Gates, 2006). The label “alternative” frequently evokes a picture of a school where unruly students are sent for the purpose of removing them from the mainstream. Alternative schools do contain students with behavior, social, and academic issues. Frequently, alternative schools are defined by the challenges their students face rather than the support and effect of the institution on improving the student.

Alternative schools frequently lack consistent funding sources which add to their vulnerability and raises questions of sustainability. Accountability is important for legitimacy which in turn affects funding, program development, and program sustainability. It is not uncommon to find alternative schools in non-traditional settings with significantly limited resources and a staff that is not highly qualified. Additionally, alternative school staff must teach to a wide range of skill levels, often have an inordinate number of different classes to prepare for, and frequently teach some classes outside of their own content area. Alternative schools may compromise on teacher quality and resources in order to maintain their small familial environment.

Within the context of this paper the author proposes that the purpose and definition for alternative education is understood by answering the question, “What does the school need to do in order for the student to be successful?” Answering the question requires one to define success. For some, success is simply separation from the main stream. For NCLB, success is a proficient score on an achievement test. For this author, success is academic achievement as measured by proficient scores or documented improvement on academic achievement tests, as well as gains on an array of factors that impact student achievement.

2.6 Alternative School Evaluation

The actual status of alternative schools is hard to assess, since state and national data is limited by a general definition, as well as a tendency by states to combine alternative data with the data from the sending high school, middle school, or elementary school. The decision to include alternative student data with the sending school is logical when one consider the potential to skew data for the sending school. Separating the data of students from their sending school would create an effect indicating academic gains at the sending school that are simply indicative of the impact caused by moving out low scoring groups from the school demographics. Additionally, the small sample size of alternative programs may result in insufficient data for school and program assessment at the local, state, and federal level. NCLB requires a sample set of at least 30 students. Some alternative school enrollment is less than 30 students. Many alternative school students are transient thus limiting the ability to measure the effect on one segment of the school population.

2.7 Alternative School Effectiveness

Those who work in or with alternative schools are often passionate about their work and cite many individual success stories. The individualization that is key to success in alternative education is also the barrier that makes evaluation particularly difficult. The difficulty of the task and the passionate certainty of success from those who are intimately involved have left the field with limited evidence of their effectiveness.

Are alternative schools effective in enabling student achievement? How do we know schools are effective and students are learning? Is standardized test proficiency the only measure of student learning that counts? Is success simply defined as proficiency on a state mandated test? If we believe all students can learn, we must have a means to measure their learning. This paper studies the utilization of a growth model to show individual student progress, as compared to the current proficiency standard set up by NCLB. Two student groups do not benefit from the current NCLB standards based model. Those groups,

the outliers, are the highest achieving students and the lowest achieving students. While NCLB claims to “leave no child behind”, this writer believes that a proficiency model does exactly that. A description of the problems of a proficiency model as it relates to at-risk, low-performing students is identified, and a model that evaluates and informs practice is introduced in this study.

The research on alternative program evaluation is somewhat limited (see table 2). There is, however, extensive qualitative and survey research on the social and behavioral aspects of alternative education. Research shows that alternative schools were effective in increasing student attendance (Gettys & Wheelock, 2004) and decreasing discipline problems (Davis, 1994), both factors that increase the opportunity for students to be in the classroom for learning. Harter (1990), Mirsky and Wachtel (2007), and Nichols and Utesch (1998), showed gains in pro-social values, motivation, and self-esteem. Bryk, Lee, and Smith (1990) conducted a quantitative study that showed a correlation between caring relationships and higher academic achievement. Conversely, low quality social interactions between at-risk students and their teachers and peers are frequently identified in school dropouts. Fairbrother (2008) talks about the caring and support of the alternative school environment but notes serious concerns about the low expectations and the remedial level of work. Kim & Taylor (2003) found that alternative schools provided a caring environment and engaged student trust but did not provide meaningful and equitable education. Many researchers have expressed concerns about inadequate academic support to enable students to be academically prepared (Kraemer & Ruzzi, 2001, Lehr & Lang, 2003, Foley & Pang, 2006). Alshuler & Myers’s research showed some academic progress by students enrolled in alternative programs (1994). In an article that evaluated the perceptions of Black and Latino adolescents, Kaplan (1999) determined that students felt that they were learning more in the alternative program than the regular program. This data was obtained through student surveys and was not substantiated by any quantitative data of achievement. Given the intensity of the debate, it is remarkable how little quality rigorous empirical research exists for most alternative schools.

Nationally, alternative schools have existed under the radar of most bureaucracies. Prior to 2008, the state of Missouri did not even collect data on the existence of alternative schools. As districts become

more accountable for every student, alternative schools are being held accountable as well. The accountability movement will have an impact on alternative education. Alternative schools have the opportunity to develop a technical core on educating the at-risk student population. If alternative schools are to remain true to their mission, they will need to develop a means to measure their impact on student achievement. Doing so will enable them to realize a structure of advocacy that supports the unique needs of the students they serve.

2.8 Challenges to quality research on Alternative Schools

As the scarcity of evidence indicates, both expectations and alternative schools data based on research is thin at best. This research study attempts to increase the knowledge of, and capacity of, alternative schools to collect and evaluate data. The goal of effective alternative education evaluation is only partially realized. It will require additional evaluation tools and further research. The next section addresses the central reasons that appear to have undermined the rigor and complexity of research in alternative education. The author identifies three major challenges to alternative school research: 1. determining what is success or effectiveness, 2. determining an assessment model that is valid, and 3. designing quantitative evaluation.

2.8.1 Challenge # 1: Defining success and failure

A fundamental problem in alternative research is defining success and failure. Historically the goal for general education has not been clearly defined, so it is no surprise that alternative schools have an identity crisis. Many have set the goal of alternative education very low. Some have simply expected alternative schools to keep bad kids away from good kids. Few have really expected students to achieve at the same level as regular students. It is a quandary for alternative educators who want the best for their students but understand the challenges faced by their students. The issue of high standards and high challenges must be dually addressed in determining alternative school effectiveness.

Success and effectiveness are subjective terms. Each state - - and for the most part - - each school district define what success means for their alternative schools. Sadly for some, the goal of an alternative school is to house students that are unwanted in the traditional school. In 2009, the National Alternative Education Association set new a standard for alternative schools identifying indicators of quality programming. The NAEA standards offer a descriptive guide for alternative school models. The authors suggest that the indicators will serve as a basis for program monitoring but provide no research on effectiveness. A study done by the state of Tennessee (Morgan, 2005) concluded that “Alternative schools lack systems of accountability to ensure program quality.” The Virginia Commission on Youth study (Hamaker,2006) concluded that “70% of program administrators perceived changes in student academic performance” but offered no data to support their perception. Until successful alternative schools are defined, alternative schools will continue to be judged by the challenges faced by the student population rather than the value added by the school.

2.8.2 Challenge #2 Assessment models: Threshold vs. Growth model

A fundamental problem in assessing alternative schools is the competing approaches to evaluating performance and their relative appropriateness. The author compares two methods for evaluation: the threshold model and the growth model. The threshold model is based on one score that is designated as proficient with all scores below that score designated as “not proficient”. This model does not account for the level of achievement prior to instruction. A growth model uses some form of pre-post measure to assess student gains over the instructional time. A growth model is a more judicious approach to alternative school evaluation given the lower starting point of many students. A student who enters the program at a third grade level and gains two years has made significant gains but is still labeled as a failure. A growth model would identify the same student as successful given their gains in achievement. The growth model does not allow students and their schools to accept scores below the proficiency level but rather provides incremental steps for students to measure as they seek proficiency. Under the threshold model, one might expect that all alternative schools would be labeled as failures.

The single test, threshold measure of assessment, used to evaluate schools for NCLB is, in fact, a contradiction of the intent stated in No Child Left Behind. This is an important distinction because the NCLB definition of success is a threshold model that does not consider the starting point of the student and the growth earned during the time of intervention and instruction. Approaches to research on the effectiveness of alternative schools have been qualitative, or perceptive survey based. Systematic, rigorous, empirical research has been lacking which is the third problem in alternative research.

No Child Left Behind has focused much attention on the issue of accountability. In most schools, the success of the school/student is based on a state determined level of proficiency. It is simply a state defined mark in the sand. NCLB has forced schools to address the achievement issues of all student groups. Disaggregate data is now readily available to educators and the public. This focus on assessment has created increased data and perhaps has better informed decision-making. Recent changes at the federal level have introduced a growth model of assessment that considers a child's annual progress toward proficiency over a longer period. Given the difference, growth models may be more appropriate than threshold models since alternative schools serve students whose performance may be significantly below the threshold of proficiency.

A growth model provides possibilities for students as well. In many school districts, factors are identified early on. A series of interventions are attempted at many different levels. Successful interventions cause the student to lose the label of “.” With other students, failed interventions may continue to occur over many years and on into high school. If data is collected on the interventions and their impact, it is seldom shared, and even then is usually subjective and often cumbersome.

NCLB assesses schools and districts by determining the percent of students who reach or surpass a proficiency standard. It is a threshold model. This model does not consider individual student data or individual growth. All schools, regardless of current performance, are expected to have all students proficient by 2014.

In an attempt to be more informative, some states have implemented alternative assessment models. Two models recognize student improvement over time as measured by state academic tests: The

Growth Model (McCall, & Olson, 2004; Schafer, 2006; Stevens, 2006; Zvoch, 2008) and The Value added Model (Sanders, 1994; Gong, 2004; Hershberg & Lea-Krueger, 2004; Goe, 2008). The Growth Model is a longitudinal evaluation model that seeks to identify individual student growth from one year to the next. The Value Added Model may analyze the same data as the Growth Model, but the data is utilized to assess the impact of a teacher, a program, or a school. (McCaffrey, Lockwood, Koretz, & Hamilton, 2003; Goe, 2008) According to Andrejko, 2004, “The measure of growth is crucial to understanding the effect of instruction in urban schools.” Andrejko explains that urban teachers intuitively know their students are making significant gains and correct data analysis will confirm such and improve instruction.

Insert Table 3 about here

Many have criticized NCLB, yet even its greatest critics tend to see the value of the increased focus on data. The focus has caused us to review what we do and how we do it. Data comes with a plethora of challenges, yet data can help us analyze our practices and influence our actions. If NCLB evaluation motivates schools and districts to improve their performance, then one might wonder if individual student data should motivate an individual student to set higher goals and seek to attain them.

A fundamental problem is the competing approaches to evaluating performance and relative appropriateness. There are, namely, two methods: threshold or growth models. Given the difference, growth models may be more appropriate than threshold models since alternative education serves students whose performance may be far below the threshold. The threshold model is a more judicious approach to evaluation given the starting point of youth.

2. 8.3 Challenge #3 Qualitative vs. Quantitative Data

Alternative schools pose an assessment dilemma. If alternative schools address each student's needs in an individualized manner, the treatment provided will differ for each student and assessment of effectiveness will be impossible. While individualization is a strength and a challenge for researchers, one can build on the commonalities described in this paper to compare and evaluate programs when concrete data is collected.

This study is important because it defines success and failure, identifies an accountability model that measures program value, and attempts to provide a quantitative, systematic, rigorous, empirical research that has been lacking in alternative research. This study attempts to rigorously compare a variety of data that measures student growth through multiple measures. The role of a single, onetime state standardized testing has grown exponentially with the implementation of NCLB. Newspapers publish test scores that label schools as proficient or failing. Yet, research literature questions the accuracy of a one-time test to evaluate an individual student or a school district. Perhaps a more accurate measure of a student's learning or a school's effectiveness would consider multiple measures that include, but are not limited to, state mandated tests. Andrejko, 2004, states, "No one test tells it all. Multiple sources of data, both quantitative and qualitative, provide a more comprehensive picture of student progress and learning than one test." Research shows that attendance (Carroll, 1963 Easton & Engelhard, 2001; Roby, 2004; Arter, 2007), behavior, and grades are all indicators that correlate to academic achievement. Factors such as self-esteem and motivation also show a positive relationship to academic achievement and student success (Meece, Blumenfield, & Hoyle, 1988; Nichols, 1996; Nichols & Miller, 1994; Pintrich & DeGroot, 1990).

Qualitative studies and anecdotal accounts from staff, students, and parents attest to the challenges of the population and also the perceived effectiveness of alternative education programs. There are hundreds of research articles on the subject, yet there is minimal numerical data addressing the effectiveness of alternative education programs. Much of the research is small sample, qualitative or survey based studies that focus on the socio-emotional areas of student growth through anecdotal data rather than quantitative student achievement data.

Insert Table 2 about here

This study takes an important next step. In the context of empirical growth model theory, this study applies quantitative perspective to comparing success of students in alternative and regular school. It will employ clearly defined multiple measures of success and failure. Assessment and evaluation of effective alternative schools require that data collection and analysis reflect incremental growth toward the goal of proficiency. The assessment should measure the student's and the school's progress toward proficiency on multiple measures. Data should inform school leadership and classroom instruction as well as the individual student. This study contributes to the research by comparing a range of quantitative factors related to student success from quarter to quarter as students progress through school. The study will be limited to students within one district that includes a 7-12th grade alternative school, a regular high school and a regular middle school.

The research study will apply and analyze the use of an Individual Growth and Achievement Profile (I-GAP) as a tool to measure student success. The I-GAP was designed by the alternative school to provide students, parents and staff quarterly data on each individual student's progress. A sample of the individual student format is included in the appendix (Figure #1). While initially designed to be used at the individual student level, the model will provide individual growth data to the educators and policy makers that serve students as well. The model can be used to evaluate the progress of programs such as alternative schools through collective group gains data. Currently, schools where most students score in the lower quartile may feel that proficiency is an impossible dream. Staff, students, and parents may lack hope and the motivation to exert the considerable effort needed to 'catch up' to the expectations on NCLB.

This study will demonstrate and provide a model of accountability for alternative education programs and the students served in such programs. The national accountability movement requires that alternative education programs address the need for data-based accountability systems. To date, most research on alternative schools is qualitative or anecdotal. While current research does speak to program effectiveness, it does not meet the standard of evidence expected given the accountability expectations of local, state, and national educational interventions. The small size of alternative schools lends them to innovation, and the incorporation of effective assessment allows an alternative school site to serve as a pilot site for new ideas that than can be replicated on a larger scale in the regular school setting. The I-GAP model is not limited to alternative schools, but could in fact be used to any group of students to measure the changes in success factors over time. The study has implications for the regular school setting as well as the alternative school setting.

2.9 Alternative School Sample

This study analyses data from one alternative school as compared to students in a regular school setting. Implications for all alternative schools require a descriptive analysis of alternative schools nationwide. A concrete definition of alternative education is elusive and adds to the challenge of evaluation. Lehr's survey, 2003, indicated that most alternative schools can be described in multiple ways. To some degree, alternative schools are simply alternatives to regular education. NECIS (2002) defines an alternative education as "a public elementary and secondary education that addresses needs of students that typically cannot be met in a regular school, provides nontraditional education, serves as an adjunct to a regular school, or falls outside the categories of regular, special education or vocational education". The US Department of Education (Carver) conducted a comprehensive survey of alternative programs in 2007-2008. They found that alternative schools are usually housed in separate facilities from regular schools, are available in most school districts, are typically high school level, are populated through recommendations from the sending school, and usually result in a regular high school diploma.

Carver's study documented the following reasons for student referrals to alternative schools: fighting (61%), drugs & alcohol (57%), disruptive verbal behavior (57%), academic failure (57%), chronic truancy (53%), weapons-not firearm (51%), and firearms (42%). Carver also noted the high degree of collaboration that exists between alternative schools and the community support network. Most alternative schools noted collaboration with criminal justice, mental health, child protective services, law enforcement, drug and alcohol clinics, and crises intervention centers.

Research on alternative schools is predominately qualitative or survey-based. The reasons for qualitative over quantitative research on alternative schools are obvious. Alternative schools are, by nature, small and difficult to define. The interventions and supports tend to be individualized and personalized. Additionally, students who attend them have multiple barriers to academic success. An intervention that mediates one barrier may have minimal effect on the overall achievement. Morgan (2005), states "Although reduction of poor educational outcomes is a frequently cited goal, methods to systematically measure performance outcomes are not common." Without these measures, accountability for performance relies heavily upon interpretive, anecdotal evidence. Consequently, predictions of students' performance are mixed and the effectiveness of alternative school programs is unclear.

Qualitative studies and anecdotal accounts from staff, students and parents attest to the effectiveness of alternative education programs. If qualitative studies indicate that alternative schools are effective, quantitative data should support the hypothesis that alternative schools are effective as well. In reality, results will either support the hypothesis or provide data that can inform future practice and thus improve the achievement of alternative school students. This study compares a range of factors related to student success from quarter to quarter as students progress through school. Students included in the study were limited to students attending a small urban school district enrolled in an alternative school, regular middle school, and regular high school. Data includes: attendance, tardies, behavior referrals, frequency of in school suspension, number of failing grades, grade point average, and dropout status.

CHAPTER 3

METHODOLOGY

3.1 Model

This study applies a growth model in an attempt to measure the change made by students rather than simply measuring students at a definitive end point. The data for each sample is gathered for each individual student two quarters apart. The first data point is the quarter that a student is referred to the alternative program. If the student attended the alternative school for at least two quarters they are included in this study as part of the alternative school sample. If the student was referred to the alternative school but did not ever attend they became part of the control group. The third group was selected using a random numbers list. All three groups were limited by the requirement that they attend a school in the district for a minimum of three quarters.

Insert Figure 1 about here

3.1 Participants

The participants of this study include 158 at-risk students at an urban alternative school, CAS; 182 at-risk students in a regular school setting; and 167 regular students in a regular school setting. In total, there are 507 students included in this study. In the context of this study, the I-GAP model is applied to a segment of the population most frequently labeled as “not proficient”. The sample group of CAS alternative students is compared to a control group which consists of at-risk students at a regular school and regular students at a regular school. All three samples originated from the population of the same urban school district. This study reduced selection bias by creating a mirrored control group from

the regular population that reflects the characteristics of the alternative school students. The alternative school is a part of small school district of 2,500 students located in a large urban metropolitan city. The district is comprised of four elementary schools, one early childhood program, one middle school, one high school and a district committed to an academically rigorous program of study and the success of every student.

This sample of at-risk students at CAS and the at-risk students at the regular schools were identified through a review of the District Student Services Team (SST) Agendas. SSTs function in every building. The team identifies students of failure and recommends interventions. Due to limited space at the alternative school, many students who are candidates for the alternative school are not given the opportunity to attend. This group is the control group for this study. A third group is composed of students from the regular settings that are selected using a random numbers list. Data is collected in the same manner for all three groups.

At-risk students are students who frequently score below proficiency on the state standardized tests. At-risk students are also often times referred to as “troubled”, “failing”, “potential drop-out”, “ineligible”, “behavior problem”, “slow learner”, or “unmotivated.” These students have received much feedback that they are not capable, that they do not fit in, and that it is hopeless. Frequently they have data supporting their failures - low test scores, low grades, behavior issues, and retention. Most of these students feel that they are also unwanted in their school system. They identify themselves as “a child left behind” and they do not believe they have the power to change their status (Conley, 2002).

Students ranged from 7 to 12th grade. Graphs 1A, 1B, and 1C show the proportion of students in each grade level in each sample group. The largest proportions of at-risk students at both CAS and the regular schools begin to be identified in 9th grade. It is in this beginning year of high school that many students struggle and become labeled as “at-risk.” Specifically, the largest proportion of at-risk students in all settings are in 9th grade – 28% of CAS students are in the 9th grade, while 46% of the at-risk students in the regular schools are in the 9th grade. This is largely due to district policy that mandates

students must complete 25% of their high school graduation requirements to be promoted to the 10th grade.

Insert Figure 2, 3 & 4 about here

The current assessment model for NCLB does not recognize the student's current performance as a base for measurement. McCall, Kingsbury, & Olson (2004) compare the NCLB model of measuring student growth to a fitness gym. In their analogy, they point out the unfairness of comparing one gym named, "Tough Guys" to another gym named, "Couch Potatoes". The composition of clientele in the two gyms is obviously different and the results of the gyms will reflect this difference. In the same manner, students and schools differ greatly in clientele. Comparing schools or students without regard for where they started is simply unfair. The goals and expectations for all students should be equitable but students and schools who find themselves playing "catch up" should have the support to do so. The study analyzes multiple data points that indicate individual student growth in achievement and factors that support achievement. The structured empirical context of the study, although not random, has no domestic bias. This study, set in an urban school district, evaluates the effectiveness of one alternative school for students as compared to at-risk students in the regular schools and all students in the regular schools.

3.2 Setting

Insert Figure 5 about here

Chart 1 provides information on the characteristics of the sample of students in each school setting. Chart 1 shows that an overwhelming majority of at-risk students are on free-reduced lunch status, suggesting that they come from families that are low socioeconomic status. 77.22% of the CAS alternative school students and 81.57% of the at-risk students in the regular schools are on free-reduced lunch, whereas 59.88% of regular school students are on free-reduced lunch. In addition, the proportion of minority students who are at-risk is much higher than the proportion of regular students at the regular school. Above 80% of students at CAS alternative school students and the at-risk students in the regular school are black, while less than 70% of regular students in the regular school are black.

3.3 Study Focus

The focus of this study is the effectiveness of one alternative school for students, as compared to at-risk students in the regular school settings, and all students in the district. The samples in this study are composed of three different study groups: at-risk students who attended Center Alternative School (CAS), at-risk students who were referred but did not attend Center Alternative School and all 7-12 students in the district. All students attended either Center Middle School or Center High School first, and were then referred to Center Alternative School through the building level Student Services Team. CAS alternative school students were enrolled for at least a semester (two quarters) at Center Alternative School after the SST referral. The at-risk students attended regular schools (control group) were also referred to Center Alternative School; however, they did not attend. The reasons they did not attend Center Alternative School include: there was no space available, others were given first priority, the student choose not to attend, or the parent declined the opportunity for their child. The independent variable in this study is the school group setting. The dependent variables in this study were selected because of availability and the value they add to a more complete picture of alternative education, student

success, and, more specifically, student achievement. They are comprised of three areas with multiple data points in each area:

Attendance Data - % attendance, # of tardies

Behavior: Data – number of referrals and days of ISS

Academic Data – grade point average, # of failing grades, dropout status

The study will control for gender, race, age, and SES. The unit of observation in this study is the individual student. Data is collected each quarter on all students in all three schools. Although not a random sample, there is no dramatic bias. The first data point for the groups was the quarter coinciding with their referral from the building level Student Services Team (SST). The second point was a semester (two quarters) after the first. This decision eliminated students who did not have three quarters of data, are more mobile or transient, and would experience less effect from the school setting. Student information is linked between the first data point and the second point via a number assigned to each student for the purpose of this study. All student names are eliminated to protect the student.

The dependent variables include multiples measures that promote or measure student achievement, including: attendance, tardies, failing grades, grade point average, behavior referrals, in school suspension, and end status (dropout). The Independent variable is the school group - - at-risk alternative students, at-risk students in the regular schools, and all regular school students. The control variables include: race, SES, gender, age, and grade.. Multiple regression (using growth over time) analysis will determine the strength and direction of the linear relationship between the independent variable (the school setting) and dependent variables (attendance, behavior, and grades) holding constant the identified control variables.

The I-GAP data query will draw the identified data from the current school information system. The query provides data on each student each quarter that he or she is enrolled in any of the schools. This study will compare the I-GAP data from one semester to the next, while controlling for factors such as socio-economic status, gender, race, grade, and age. The model used is a growth model which seeks to identify individual student growth from one point in time to a later point (McCall & Olson, 2004; Schafer,

2006; Stevens, 2006; Zvoch, 2008). The Growth model depends on quality, multiple measures, and longitudinal comparisons. The contribution of the growth model lies in the data collection at the student level. Analyzing data at the individual student level allows us to analyze the status of the “outliers”. Some students will show a positive change and others will show a negative change or decline in the data demonstrating success. Alternative school student data will be compared to a comparable group of at-risk students who remain in the regular school setting and also to all students in the regular setting.

3.5 Study Limitations

The purpose of the study is to address the challenges of evaluating alternative schools. One of the challenges is the collection of comparable data used to measure growth. Comprehensive test data (one measure of student achievement) is not gathered frequently enough to allow for growth level comparison. Especially problematic is measuring student academic growth. Ideally students will be assessed each quarter on core academic content to measure growth and identify ongoing needs to inform instruction. The renewed interest in testing and more importantly, the growth model or value added model may eventually lead to instruments that truly measure student gain over short increments of time. Such instruments are essential in measuring special programs and schools but would be beneficial for all students and schools.

A second limitation of this study is the data sample. The study sample represents only one alternative school and one district. A related limitation is the lack of random assignment to the at-risk control group and the intervention group. The alternative group and the comparison group are composed of identified at-risk students. The at-risk students that comprised the control group were all “candidates for the alternative school” as identified from minutes of building level Students Services Teams. The group identified became either the study group at the alternative school or the at-risk control group at the regular schools. Referral to the alternative school does not mandate a student attend that school. About half of the students referred to the alternative school actually attend. Perhaps agreeing to attend the

alternative school is a measure of the student's willingness to change. More in-depth study is required to determine if the alternative students and the control group students are initially equally.

Many at-risk students enrolled in alternative schools are transient. Since this study covers three academic quarters of data, students who are enrolled for a shorter period of time are not included in any of the samples. While some students may show improvement shortly after they arrive in a program, one would expect that the impact of a program would require a measureable length of time. It seems reasonable that a school would need to enroll students for a minimum of a semester to truly have an impact. Elimination of the short term attendees from the alternative school sample does prevent one from inferring results to all alternative students. Student mobility is a challenge of alternative education that is not addressed within the context of this study.

CHAPTER 4

FINDINGS

This study analyzed the change in the made on eight different outcome variables:

- Change in GPA (grade point average)
- Change in the Number of Failing Grades
- Change in Attendance Rates
- Change in the Number of Times the Student was Tardy
- Change in the Number of Referrals for Disciplinary Reasons
- Change in the Number of In-School Suspensions
- Dropout, or Not, at the Final Enrollment

Change in GPA, Change in Number of Failing Grades, and Dropout Status are three outcome variables that measure academic improvements; Change in Attendance Rates, Change in Number of Times the Student was Tardy are two outcome variables that measure attendance improvements; Change in the Number of Referral for Disciplinary Reasons, Change in the Number of In -School Suspensions are the three behavior improvement outcome variables. In particular, this study analyzed and observed the changes made on these outcomes listed above for the three different groups of students over time. The change in each variable is calculated by subtracting the first data point score from the second data point score.

This study conducted two ordinary least squares regression tests on each of the outcome variables. In each of the eight regressions outcomes, there are two models – Model 1 and Model 2. Model 1 includes two control variables -- CAS alternative school students and at-risk students in a regular schools. The reference category (the constant) is regular students in a regular school. Model 2 includes these two independent variables along with control variables for free or reduced lunch (1=Yes; 0=No),

gender (1 = male; 0 = female), age, grade level, and race (White, Hispanic, Asian, Native American; Black is the reference category).

Change in GPA

The results of Model 1 show that for regular students in a regular school, their GPA increases by 1.250 points on average ($p < 0.010$). Model 1 also shows that on average, the at-risk students in regular schools significantly decrease their GPA from time one to time two by a larger amount than the CAS students ($p < 0.010$). The at-risk students in regular schools decrease their GPA by 1.082 points compared to the regular students in a regular school, while the CAS students do not significantly change their GPA between the two points in time. Model 2 includes the demographic controls and the results are quite similar to Model 1. The constant, 1.705 is significant ($p < 0.010$) and suggests that regular middle-class male black students in a regular schools increase their GPA by 1.705 points, on average. The at-risk students in the regular schools however, decrease their GPA by 1.050 points on average ($p < 0.010$). Adding the demographic controls does not drastically or significantly change the results. Moreover, none of the demographic control variables significantly affect GPA changes.

Insert Table 4 about here

When examining GPA, at-risk students in the regular schools are more likely to do worse over time – decrease their GPA – compared to at-risk students in an alternative school setting (CAS). These results match the comments made by students in this alternative program and those found in existing research (Kaplan, 1999) that alternative school settings positively impact student achievement.

The research design is important in the analysis of these results. If the study had simply compared the GPA of alternative students to regular students the results would have indicated that the GPA of alternative students is lower than regular students and deduced that alternative schools are ineffective. Using the gain scores (difference between data point two and data point one) allows the researcher to observe longitudinal change regardless of starting point of each student. The comparison of alternative students' GPA gains to the same data from the at-risk students in the regular school setting indicate the most dramatic effect. This model is non-existent in previous research on alternative school effectiveness. The same is true for failing grades.

Change in Failing Grades

The number of failing grades is another academic –related indicator. Model 1 shows that on average, regular students in the regular schools do not increase the number of failing grades by much ($\beta=0.357$; $p < 0.010$). At-risk students in a regular school setting, however, significantly increase the number of failing grades over time ($\beta=2.021$; $p < 0.010$). On average, an at-risk student in a regular school increases the number of failing grades by 2.021. Thus, it can be stated that at-risk students in a regular school have on average two more failing grades than regular students in a regular school. The CAS alternative school students also significantly increase their number of failing grades ($\beta=0.307$; $p < 0.050$). However, the coefficient is not as robust as for at-risk students in the regular school. Model 2 adds the demographic control variables and the coefficient for at-risk students in regular schools slightly decreases, but not by much ($\beta=1.922$; $p < 0.010$). Model 2 also indicates that the older students are more likely to have more failing grades than the younger students ($\beta=0.172$; $p < 0.050$). However, for each grade level increase, the number of failing grades decreases, on average ($\beta=-0.145$; $p < 0.100$).

Insert Table 5 about here

Overall the results of the regression suggests that the at-risk students in the regular school settings performed worse on the two academic indicators (GPA and number of failing grades) than the CAS students who are in an alternative school setting. This partly may be due to the fact that alternative schools are smaller than regular schools with smaller class sizes and more supportive one-on-one teacher-student relationships. Another factor that may contribute to this finding is that alternative schools provide differentiated instruction and more academic support than a regular school setting (Arnone & Strout, 1980; Barr, 1981).

Change in Attendance Rates

Attendance data is reported as a percent and measured by change in attendance from the first data point to the second data point. The constant in Model 1 represents the average increase in attendance rate of the regular students in regular schools is ($\beta=71.22$, $p < 0.010$). Model 1 shows that the at-risk students in regular schools decrease their attendance rate by 6.310% on average ($p < 0.010$), while CAS alternative school students decrease their attendance rate by 4.035% on average ($p < 0.010$). While the at-risk students in the regular school setting and the CAS alternative school students both showed a negative effect (re: drop in attendance), from the constant the at-risk group in the regular schools decreased their attendance rates by more, on average. One would expect the CAS alternative school students and the at-risk group in the regular school setting to be similar, as they are both composed of at-risk students.

In Model 2, adding the demographic control variables for free/reduced lunch, gender, grade, age, and race increased the coefficient for the regular students at the regular schools ($\beta=85.913$, $p < 0.010$), increased the CAS alternative school students coefficient slightly ($\beta=-3.87$, $p < 0.010$) and showed minimal impact on the at-risk students in the regular schools($\beta=-6.369$, $p < 0.010$).

Insert Table 6 about here

Findings indicate similar results for both models, the CAS alternative school students and at-risk students in the regular school setting attended less than regular students; however, the at-risk students (regular school setting) performed lower than the CAS students (alternative school setting). Interestingly, regardless of demographic characteristics, being at-risk has a greater effect on attendance than other demographic variables..

Gains in Tardies

As Model 1 shows, the average change in number of tardies for regular students in a regular setting is 3.168 tardies ($p < 0.010$). For CAS alternative students, the number of tardies increased greatly ($\beta=4.420$; $p < 0.010$) while for at-risk students in the regular school setting, the number of tardies increased, but not as much ($\beta=2.988$; $p < 0.010$). Including the demographic controls, Model 2 shows the same pattern. The CAS coefficient remains significant ($\beta=3.913$, $p<0.010$) and the at-risk students in the regular schools coefficient is significant ($\beta=2.296$, $p < 0.010$).

Insert Table 7 about here

While attendance outcomes are not as negative for CAS students as for at-risk students, the number of tardies given to CAS alternative students increases more than for at-risk students in the regular

setting over time. The results for tardies were somewhat unexpected and pose questions that are outside the scope of this study:

Change in Discipline Referrals

The change in discipline referrals variable is simply the number of behavioral referrals documented for each student during the quarter of data point two, minus referrals of the first data point. It should be noted that the referrals result in a wide variety of consequences, such as detention, mandatory school work completion, or parent-teacher conference. Additionally, there may be non-punitive consequences for the student. The behavioral consequences are studied through the “In School Suspension” and “Out of School Suspension” variables. Referrals can be written by any staff member; therefore they are not exclusive to the classroom setting.

Model 1 shows that the CAS students increase their referrals from before they enrolled into the alternative school ($\beta=1.306$; $p<0.010$). This positive coefficient indicates an increase in discipline referrals from a non-alternative school setting to an alternative school setting. Model 2 also shows that CAS alternative students have a higher number of referrals than they did prior to attending an alternative school ($\beta=1.295$; $p<0.010$).

Insert Table 8 about here

This finding suggests that inappropriate behaviors of students increase in an alternative school setting; however, it actually may be because student behaviors in a school of 100 students are more likely to be noticed, and therefore be referred, than in a school of 700. The effect of alternative school setting may be capturing the effect of school size as well as inappropriate student behavior. This result is not

totally expected since students often comment that “they can’t get away with anything” at the alternative school.

Change in In-school Suspension (ISS)

The In-School Suspension variable is measured by subtracting the number of days a student was assigned In School Suspension during the quarter of the 2nd data point from the 1st data point. Model 1 shows that CAS alternative school students and at-risk students in the regular school setting had significant increases in in-school suspensions compared to regular students in a regular school ($\beta=1.426$; $\beta=0.568$; $p < 0.010$). In fact, CAS students triple the number of in-school suspensions than at-risk students, on average. Model 2 shows the same pattern. CAS students significantly increased their in-school suspensions by 1.443 ($p < 0.010$), on average while at-risk students in the regular school setting increased their in-school suspension by 0.376, on average ($p < 0.100$).

Insert Table 9 about here

Given the findings it appears that in school suspension is directly related to the number of disciplinary referrals given. CAS students get more referrals, therefore they get more in-school suspensions (re: the consequence). In school suspension is a direct outcome of a discipline referral; however, not all referrals result in In school Suspension.

Final End Status Record =Dropout

The final end status record provides specific information on the status of the student at the time of the last record in the district. Some of the students in the study have graduated, some have dropped out, and many are still in school. Logit regression analysis was conducted to analyze the data on the segment

of the samples that had dropped out. In Model 1, the findings show that CAS alternative school students were less likely to drop out of school compared to at-risk students in a regular school setting. CAS alternative school students were ten times more likely to drop out on average than regular students in a regular school setting, whereas at-risk students in the regular school settings were nineteen times more likely to drop out on average than regular students at a regular school and this was highly significant ($p < 0.010$). Model 2 shows the same pattern, however the gap between CAS students and at-risk students in the regular school setting increases.

Insert Table 11 about here

CAS alternative school students were only nine times more likely to drop out on average than regular students in a regular school setting, while at-risk students in the regular school setting were twenty-one times more likely to drop out on average than regular students in regular schools. Surprisingly, SES, gender, race, grade, and age were not significant. This finding suggests the alternative school setting provides more support for these students so that they can meet their goal of completing high school. A review of the research results in literature indicates that drop-out prevention is the most common positive measurable outcome of alternative schools (Saunders, 2001; Loutzenheiser, 2002; McCall, 2003)). It is likely that some students utilize the transfer to an alternative school as an opportunity to make personal changes leading to their own success. Others may simply benefit from the small size, close relationships, academic support, and flexibility offered in many alternative schools.

CHAPTER 5

DISCUSSION

5.1 Introduction

Is alternative education effective? Does an alternative school provide a better opportunity for at-risk students than the regular school setting? Can one expect that an at-risk student will improve if they transfer to an alternative school rather than remain in the regular setting? What measurable student based outcomes will be affected by an alternative school? This dissertation examines the effects of an alternative high school on at-risk students (i.e., students who persistently fail in the regular schools), as compared to regular school effects on both at-risk and regular (i.e., not at-risk) students.

This dissertation analyzes the effects of one alternative secondary school on at-risk students as compared to regular secondary school effects on both at-risk and regular students. This study analyzes the effect of one alternative school on student academics, behavior and discipline. The effect is measured by comparing grade point average, failing grades, attendance, tardies, discipline referrals, in and out of school suspensions and dropout status prior to attending the alternative school against the same data after they have completed two quarters in the alternative school.

5.1 Summary of Findings

Analyses of ordinary least squares regressions suggest that this alternative school does have a significant impact on some of the outcome variables. For some of the outcomes, there was no difference between the alternative school students and the regular students; however the at-risk control group showed significantly negative results. On the academic indicators – GPA and number of failing grades, the results of the regression analysis shows that while CAS students' average GPA does not improve and the number of failing grades does not significantly decrease between the two points of time, the average GPA of the at-risk students in a regular school setting dropped significantly over the same period of time. Also, their average number of failing grades increased significantly over time. So while alternative school students

may not necessarily show gains, the effect of an alternative school may prevent their GPA from dropping further. The analysis in this study suggest that while there was not a large difference between the regular students in a regular school setting and the CAS students, there was a significant difference between the at-risk students who did not attend the alternative school and those who did. In fact, the at-risk students earned two or three times more failing grades than the other two groups of students. This study would suggest that alternative schools do have a positive effect on student achievement as assessed by minimizing further drops in grade point average and reducing the number of failing grades. The reasons for the difference cannot be explained without further study; however, this effect is likely related to the small size of alternative schools and alternative classrooms.

Attendance is a measure of student discipline as well as student achievement. Students cannot learn and succeed if they do not attend school. Additionally, poor attendance can be a precursor to dropping out. The results of this study show that both CAS students and at-risk students decreased their average attendance over the two time points compared to the regular students. The attendance level of at-risk students dropped significantly more than the attendance of CAS students. While any drop is negative, less of a drop is a positive result. Further research is needed to determine the cause of the attendance effect. One might hypothesize that attendance is tied to the small school setting and close student staff relationships described by most alternative schools. Wilkins (2008) noted themes that motivated students to attend included: school climate, academic environment, discipline, and relationships with teachers.

The change in tardies over the time period yielded mixed results. The CAS students showed the greatest increase in tardies as compared to regular students in a regular school setting. Tardiness of at-risk students increased but not as much as CAS students. Control variables including free/reduced lunch, age, grade, and race also influenced the outcomes. The data does not provide a clear explanation for the results. Perhaps the culture or consequences in the alternative school are less punitive toward tardies given that they have larger challenges to contend with.

Results for behavioral referrals, in-school suspension, and out-of-school suspension categories showed that students in all three groups dropped from the first data point. Both CAS and at-risk students increased more on average than regular students in a regular school setting. CAS students increased their average number of in-school suspensions more than the at-risk and regular students. One might conclude that an alternative setting did not improve student behavior. However, the small number of students and ease of observing behaviors in the small setting of an alternative school setting suggests that these students are held to a higher standard or are just getting caught more. It could be expected that misbehavior in a regular school hallway may go unnoticed when there are hundreds of other students in the hallway at the same time. The number of in-school suspension assignments is tied to the number of behavior referrals.

The last set of regression results measure the status of the student at the last time point. All students in the study either continued in school, graduated, or had dropped-out. The drop-out data, while not a growth measure, provides another insight on the effectiveness of alternative education. Both CAS and at-risk students had a greater likelihood of dropping out than regular students. However, at-risk students in a regular school setting had a much greater likelihood of dropping out than the alternative students. When controlling for various demographic variables, alternative students were 9 times more likely and at-risk students were 21 times more likely to drop out than regular students. While one drop out is too many, the data suggests that alternative schools do improve the likelihood that students who are at-risk but attending alternative schools will stay in school.

5.2 Key Insights

This dissertation examines the effects of an alternative high school on at-risk students (i.e., students who persistently fail in the regular high schools), as compared to regular high school effects on both at-risk and regular (i.e., not at-risk) students. A significant insight of this study is the importance of creating an assessment model that measures the effect of the alternative school. The utilization of a longitudinal growth model provides a means of naturally controlling factors that are outside of the control

of the school. Alternative students may struggle to reach national and state standards but that does not preclude students from making significant gains toward that end. The effect of any program on at-risk students must address the starting point of the students. The alternative school effect is further hidden by comparing at-risk alternative school students to regular students. Results in this study on grade point average, number of failing grades, attendance and drop out status do not show significant positive effects when comparing alternative school students to regular students but become significant when compared with the control group of at risk students.

Alternative students did not show more gains than at-risk on the academic indicators – GPA and number of failing grades, the results of the regression analysis shows that while CAS students' average GPA does not improve and the number of failing grades does not significantly decrease between the two points of time, the average GPA of the at-risk students in a regular school setting dropped significantly over the same period of time. Also, their average number of failing grades increased significantly over time. So while alternative school students may not necessarily show gains, the effect of an alternative school may prevent their GPA from dropping further. The analysis in this study suggest that while there was not a large difference between the regular students in a regular school setting and the CAS students, there was a significant difference between the at-risk students who did not attend the alternative school. In fact, the at-risk students earned two or three times more failing grades than the other two groups of students. This study would suggest that alternative schools do have a positive effect on student achievement as assessed by minimizing further drops in grade point average and reducing the number of failing grades. The reasons for the difference cannot be explained without further study; however, this effect may be related to the small size and additional support. It could also be a result of a lower level of academic rigor at the alternative school. This concern is minimized as this alternative school shares a common curriculum and many common assessments with the regular school. State level assessments at the secondary level are end of course exams and do not allow for growth measurement. The development of common quarterly assessment tools would provide transformational tools to measure student progress and program effectiveness.

Attendance is a measure of student discipline as well as student achievement. Students cannot learn and succeed if they do not attend school. Additionally, poor attendance can be a precursor to dropping out. The results of this study show that both CAS students and at-risk students decreased their average attendance over the two time points compared to the regular students. The attendance level of at-risk students dropped significantly more than the attendance of CAS students. While any drop is negative, less of a drop is a positive result. Further research is needed to determine the cause of the attendance effect. One might hypothesize that attendance is tied to the small school setting and close student staff relationships described by most alternative schools. Wilkins (2008) noted themes that motivated students to attend included: school climate, academic environment, discipline, and relationships with teachers.

The change in tardies over the time period yield mixed results. The CAS students showed the greatest increase in tardies as compared to regular students in a regular school setting. Tardiness of at-risk students increased but not as much as CAS students. Control variables including free/reduced lunch, age, grade, and race also influenced the outcomes. The data does not provide a clear explanation for the results. Perhaps the culture or consequences in the alternative school are less punitive toward tardies given that they have larger challenges to contend with.

Results for behavioral referrals, in-school suspension, and out-of-school suspension categories showed that students in all three groups dropped from the first data point. Both CAS and at-risk students increased more on average than regular students in a regular school setting. CAS students increased their average number of in-school suspensions more than the at-risk and regular students. One might conclude that an alternative setting did not improve student behavior. However, the small and more strict environments of an alternative school setting suggests that these students are held to a higher standard or are just getting caught more. It could be expected that misbehavior in a regular school hallway may go unnoticed when there are hundreds of other students in the hallway at the same time. The number of in-school suspension assignments is tied to the number of behavior referrals.

The last set of regression results measure the status of the student at the last time point. Students either continued in school, graduated, or had dropped-out. The drop-out data, while not a growth measure, provides another insight on the effectiveness of alternative education. Both CAS and at-risk students had a greater likelihood of dropping out than regular students. However, at-risk students in a regular school setting had a much greater likelihood of dropping out than the CAS students. When controlling for various demographic variables, CAS students were 9 times more likely and at-risk students were 21 times more likely to drop out than regular students. While one drop out is too many, the data suggests that alternative schools do improve the likelihood that students who are but attending alternative schools will stay in school.

5.3 Contributions

National data shows that there are over 10,000 alternative schools throughout the nation. This might lead one to believe that alternative schools are effective educational programs; still alternative schools struggle for legitimacy. In a time of budget reductions, alternative schools who serve small numbers of students—with higher than average costs per students (due to small class sizes)—are often themselves “at-risk”. Literature provides an inordinate number of studies testifying to the positive impact of alternative education. However, quality non-bias research is nearly non-existent. This study incorporates a longitudinal, multi-measure model that can be applied to any alternative school or program. The collection of longitudinal data allows analysis of results at many levels from the individual student or classroom, program or school, and state or national setting.

Alternative schools seek legitimacy from within their walls as well as outside their walls. Staff that work with at-risk students, parents of at-risk students, and the students themselves can all benefit from informative data, especially that from “outside their walls”. The initial impetus for this study was to demonstrate to alternative school teachers that their efforts were making a difference for the students they teach. The current literature provides many examples of alternative programs believed to make a

difference, but little data to support those beliefs (Andrejko, 2004). Alternative schools see a high rate of failing grades, behavior problems, and dropouts and may have difficulty determining what is effective and what is not effective. They, and their students, will benefit from data that benchmarks their progress over time. A study where data indicates students are not progressing is equally important, as it can direct change or elimination of ineffective practices. Elgart (2007) in his study “One Size Doesn’t Fit All” concludes that education should be measured in the same way we measure a child’s height -- with a growth chart taped to the wall-- and marks for each interval measurement. The Growth Model that is applied in this study and as described by McCall & Olson(2004) is the” yardstick” of progressive longitudinal measurement of individual student progress. The assessment and evaluation of effective alternative schools require that data collection and analysis reflect incremental growth toward the goal of proficiency.

The results specific to the alternative school in this study contribute to a clearer picture of program strengths and challenges. While the results are mixed, they are all informative. Findings indicate the effect of Center Alternative School on grades (GPA & number of failing grades) and attendance is positive, and significant as compared to the at-risk control group. Center Alternative School incorporates traits of typical alternative schools (small size, one –on- one relationship, and academic supports) that affect these results. The outcomes of this study are supported by the outcomes of previous studies. Arter conducted a small sample study that showed gains in GPA and attendance with no effect on discipline for students in positive behavior support program (2009).

Results for all referrals associated with student discipline did not show a significant effect in this study while many qualitative studies resulted in improved behavior. Findings from interviews and observations in Duke’s study (1978) concluded that discipline rarely was a major concern in alternative schools. The study attributed these results to small school size, flexible schedules, frequent informal interaction between students and teachers, and fewer rules. The reference in this study to “fewer rules” questions whether the results of Duke’s study measured improvement in behavior or a lowering of

expectations in behavior. At Center Alternative School the behavior expectations are normally consistent with those in the regular school. Students at Center Alternative School often report that “we can’t get away with anything here”. The small size may increase the supervision and result in increased behavioral referrals. The contrast between the results supports the need for greater clarity on a model alternative program and the replication of this quantitative growth model to assess the effect—specifically in the topic of discipline—on outcomes of alternative education.

The findings of this study indicate that many more alternative students drop out of school than do regular students, but the effect of alternative school significantly reduces the rate of students dropping out as compared to at-risk students. This finding is supported in numerous studies on alternative education (McCall, 2003, Thurston, 2009, Wilkins, 2008). Dropout prevention is a common goal of alternative schools, and research would indicate that this goal is successful. Reducing the number of students who drop out of school can increase the value and legitimacy of the school. One must be careful, however to ensure that “not dropping out” is equivalent to “being successful” as a student. The value of the model presented in this study is that it looks at multiple indicators of “being successful”. The model and the school evaluated have a vision of competent learners and quality schools.

This longitudinal, multi-measure model that is used in this study can be applied to any alternative school but can also be applied to regular education. Current national and state initiatives are more frequently utilizing value added models to assess regular education. Typically the intent of the value added model is to measure the effect of teaching on student achievement and is controversially tied to teacher pay (Sanders, 1994; Gong, 2004; Hershberg & Lea-Krueger, 2004; Goe, 2008). A growth model that is used in this study seeks to identify individual student growth from one year to the next and is not traditionally tied to teacher evaluation (McCall & Olson, 2004; Schafer, 2006; Stevens, 2006; Zvoch, 2008). Tennessee has used a value added model to determine the effect of schools and teachers on student learning gains for over ten years (Sanders, 1994). Austin Independent School District, District of Columbia Public Schools, Harrison School District in Colorado, Hillsborough County Public Schools in Florida have implemented some form of value added assessment (Goe, 2008). The value added model

like the Growth model benefit from higher quality, multiple measures, and longitudinal comparisons. While both models may utilize the same data, the contributions of each are radically different. The contribution of the growth model lies in the data collection at the student level. Analyzing data at the individual student level allows us to analyze the status of the “outliers”. These students include at-risk students, special education students, English language learners, and gifted or high achieving students.

5.3 Research implications

Overall, the results of this study suggest that the effect of alternative education can influence the at-risk students’ academic achievement, attendance, and behavior and dropout status. One limitation of this study is that it only evaluates one school. Future research is needed to assess the application of growth or gains model to a broad sample of alternative schools. This study provides a model for this to occur. The design and implementation of a longitudinal data collection system can provide alternative schools insight and information on their strengths and areas of needed improvement. Schools can use quarterly data to measure short-term gains or drops. Analysis of data can be used to set and measure realistic goals for the future. Alternative schools will have data to support the need for change and to document evidence of success. Replication of this and similar studies will create a body of research within the alternative education field that can inform practice and provide comparison data between alternative program types.

A second limitation is the selection bias of the subjects in the at-risk sample groups. Because the study was overlaid on a pre-existing system, the subject selection was determined by the school system and therefore not random. For the sake of this study students are assigned to the at-risk group by having been referred to the alternative school by the SST (Student Services Team) at each of the sending buildings. Since there is a waiting list for student placement at the alternative school, many students referred do not get placed. The students referred but not placed became the control group. This study recognizes that there may be unobserved bias as the referring SST group may move one student up the waiting list and another down.

Another limitation of the study is the lack of an empirical approach, since the study is guided by the researcher rather than a solid background of research and literature on the effect of alternative schools on student achievement. The empirical method is necessary because of the limited quantity of research, the lack of experimental research, and the challenges to research previously outlined in this paper.

As the scarcity of evidence indicates, both expectations and alternative school data based on research is thin at best. This research study attempts to increase the knowledge of, and capacity of, alternative schools to collect and evaluate data. The goal of effective alternative education evaluation is only partially realized in this study. It will require additional evaluation tools and further research. The author identifies three major challenges to alternative school research: 1. determining what are success or effectiveness, 2. determining an assessment model that is valid, and 3. designing quantitative evaluation. The first challenge is currently overshadowed by the federal NCLB policies. It is important to evaluate student achievement but future research should provide insight on the importance of a more comprehensive definition of success.

This study responds to the second challenge by utilizing a growth model that collects multiple data measures from multiple school years. Resolution of the first (defining success) and last challenge (quantitative assessment measures) will provide the necessary groundwork for the full application of a growth model to alternative education.

This study highlights the need for high quality growth measurement instruments, the third challenge. Quantitative data on student achievement, disciplinary, and behavioral outcomes is crucial to ensure ongoing funding for these alternative education programs. Identifying effective benchmarking assessments of student achievement are of the utmost urgency--but beyond the scope of this study. Quantitative evaluation of alternative schools presents many challenges but multiple sources of data provide a more comprehensive picture of what affects school performance. Data analysis provides an opportunity for schools to consider significant, defined areas for improvement and change.

As with any empirical indicator designed to produce a measure of an effect, the quality and accuracy of alternative school effect will hinge on quality measurement data. Replicating the study to include multiple alternative schools would increase the reliability and add robustness to the results.

5.4 Policy Implications

This study suggests that alternative schools are effective in some, but not all areas measured. The policy implications are significant, since the only outcome from this study that is measured by national policy is the dropout rate. By most state and national policy standards, according to drop out rate, alternative schools are failures.

The challenges to evaluating the effectiveness of alternative schools outlined in this study can inform needed policy in the future. The author identifies three major challenges to alternative school research: 1. determining a definition of success, 2. determining a valid assessment model, and 3. identifying quantitative evaluation methods. The goal of effective alternative education evaluation will require policy and practice aligned to address all three challenges.

It is interesting to note that the accepted definition of “alternative school” is a definition of the students they serve, not a description of the program or school. NECIS, 2002, defines an alternative education as, “a public elementary and secondary education that addresses needs of students that typically cannot be met in a regular school, provides nontraditional education, serves as an adjunct to a regular school, or falls outside the categories of regular, special education or vocational education.” Such a definition leaves alternative schools lacking legitimacy. A governing body could choose to interpret alternative schools as a school for housing delinquents, or they could commit funding and support to alternative education yet fail to provide needed resources that allow alternative schools to maintain their small size, one on one relationships, supportive environment, academic support, and flexibility that are needed for alternative schools.

A study of state policies on alternative education revealed that 48 states had legislation addressing some aspect of alternative schools (Lehr, 2003). Lehr notes that most legislation addressed enrollment criteria, definitions of alternative education, funding sources, or curriculum. Some included legislation related to staffing or students with disabilities. Twenty-one percent of the states surveyed by Lehr legislation on all of the above criteria. NCLB policies have mandated teacher credentials and student assessment requirements with punitive consequences for failure to meet these mandates. The national policies have transformed the priorities of all schools, but most especially alternative schools. State policies provide more descriptive indicators of alternative programs which may serve to legitimize alternative schools. National policies provides greater flexibility on programming but focuses on two areas that have historically challenged alternative education: finding credentialed, high quality, teachers who choose to teach in an alternative setting and demonstrating student achievement through a onetime standardized test. As described previously, alternative school research on standardized test achievement is lacking or fails to indicate student success.

The NCLB law defines successful schools by student achievement test results on one test. This single criterion may change how teachers teach. Instructional strategies will become more focused on test preparation, while experiential, project based learning activities will be minimized. This creates a paradox for alternative educators, since many at-risk students are already resistant to traditional classrooms. The increased focus on standardized testing could force alternative schools to become more traditional, minimally as a means of survival. While a focus on improved student achievement is overdue, it important that student achievement measures include multiple measures of assessment, rather than one test score given on one day. Combining test score data with the multiple measures used in this study will provide a more accurate and useful means of evaluating alternative school effectiveness.

The small size of most alternative schools must be addressed in any policy on alternative school evaluation. The small number and the high mobility of students in alternative schools impact the volatility of student data. Policies for assessing alternative schools should allow for averaging scores

over multiple years to improve reliability. Assessments intending to measure school effect must address a “length of stay” criterion that compensates for students who attend for less than a semester.

NCLB policies require that student test scores of alternative school students are assigned back to the sending school. This is an equitable policy, in that it does not allow sending schools to “write off” the test scores of their most at-risk students by transferring them out of the home school. The implementation of this policy has, however, eliminated the return of the same data to the alternative school-- thus depriving alternative schools of their own data.

The policies that evaluate the effect of alternative schools who serve predominantly at-risk students must include measures that consider the value added by the school since the school is the unit of measurement. This can be accomplished through a growth model of assessment. A growth model measures the gain students have made over time from the point they entered the school, thus accounting for the program effect while controlling for non-school factors. Evaluation of alternative schools and their students must include an evaluation of gains over time using multiple measures. Multiple measures should include data from test scores as well as grades, attendance, and behavior. Quarterly benchmark assessments would provide students and schools data that informs and evaluates student success and school success.

Alternative school effectiveness and the education of outliers can be measured through multiple measures that are assessed over increments of time to determine the growth of students and the value of the school contribution. This model is essential for at-risk students and alternative schools; however, the assessment model could contribute meaningful information to the assessment of any student, classroom or school.

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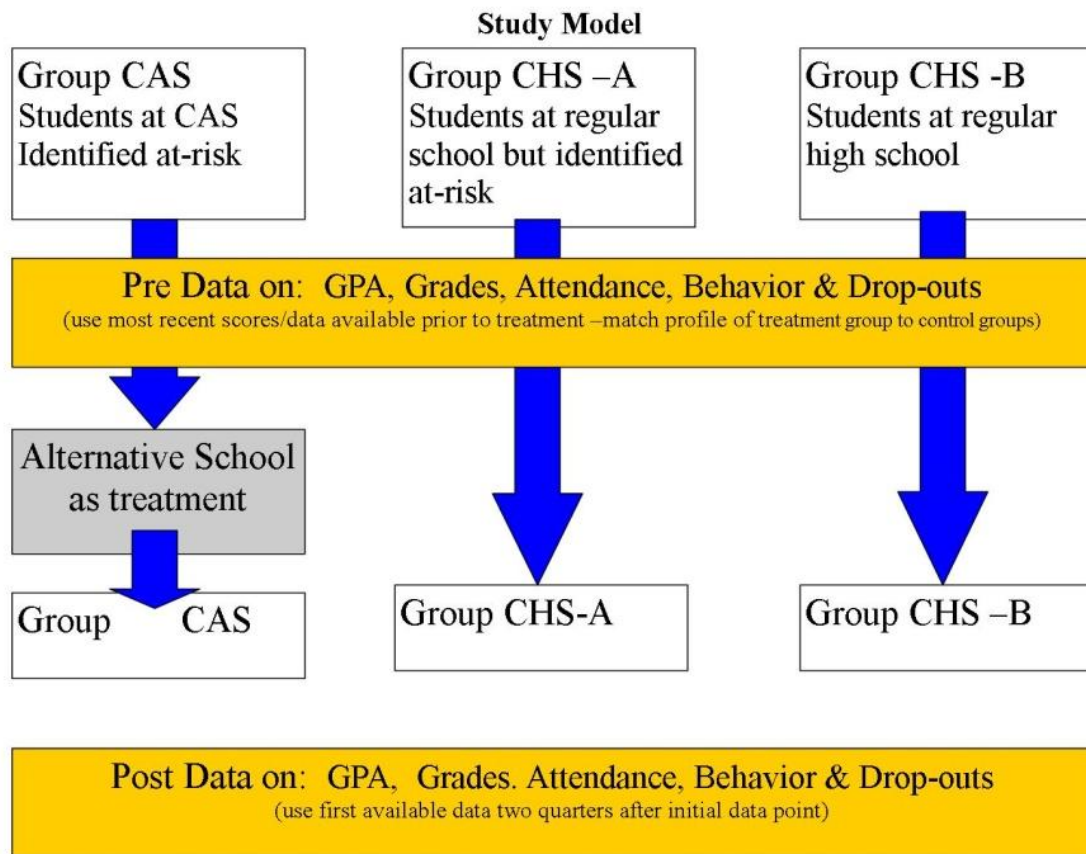


Figure 1

Educating The Outliers: Study Model

Proportion of Students in Each Grade Level, CAS

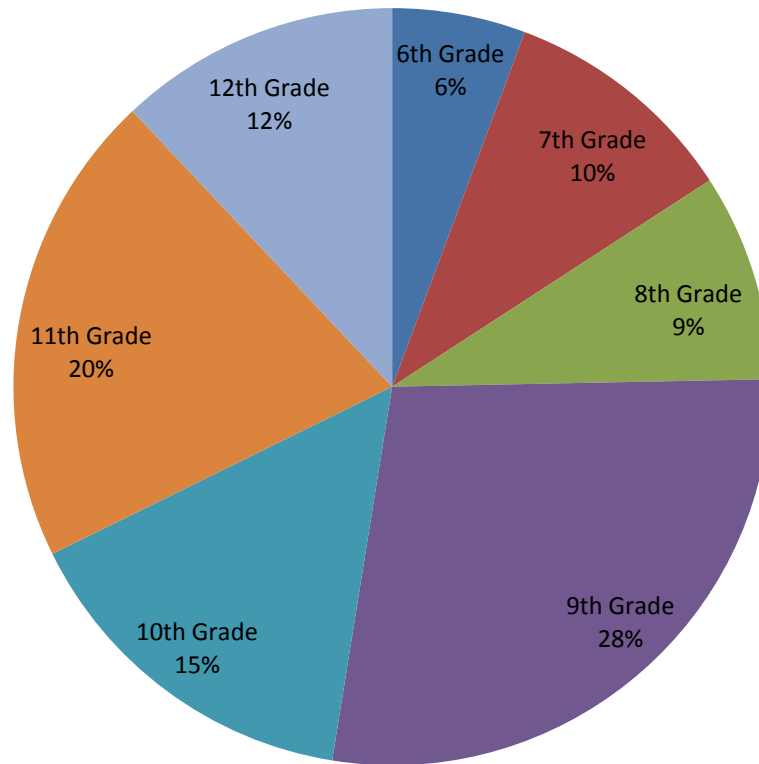


Figure 2

Alternative School Sample Group - Graph 1A

Proportion of Students in Each Grade Level, At-Risk

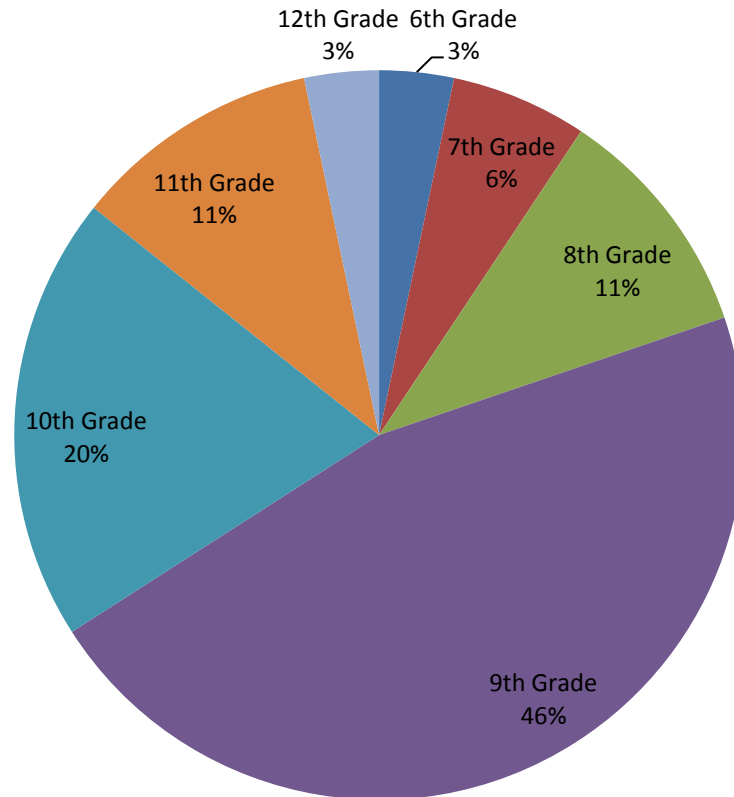


Figure 3

At-Risk in Regular Sample Group - Graph 1B

Propotion of Students in Each Grade Level, Regular

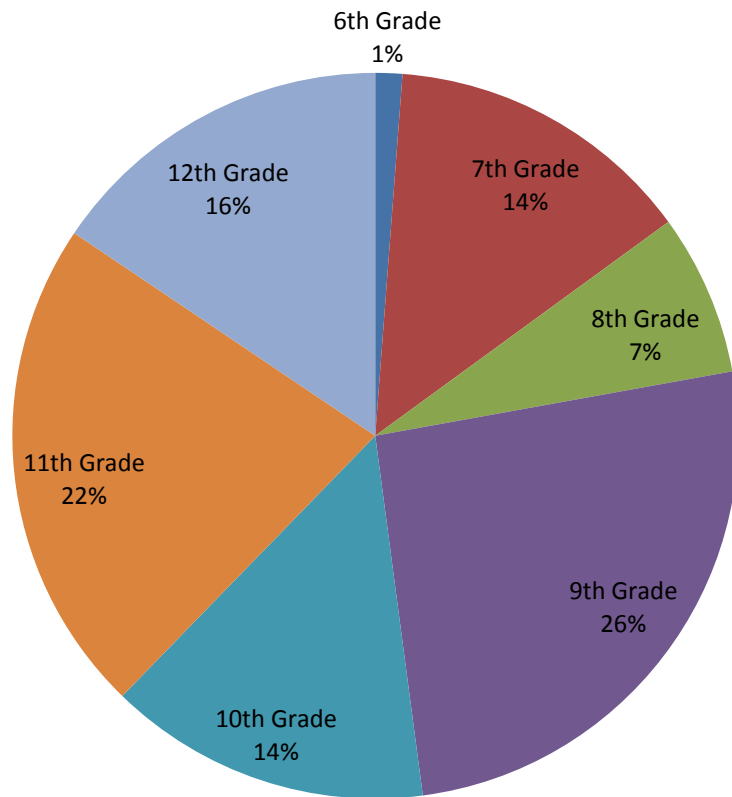


Figure 4

Regular Sample Group - Graph 1C

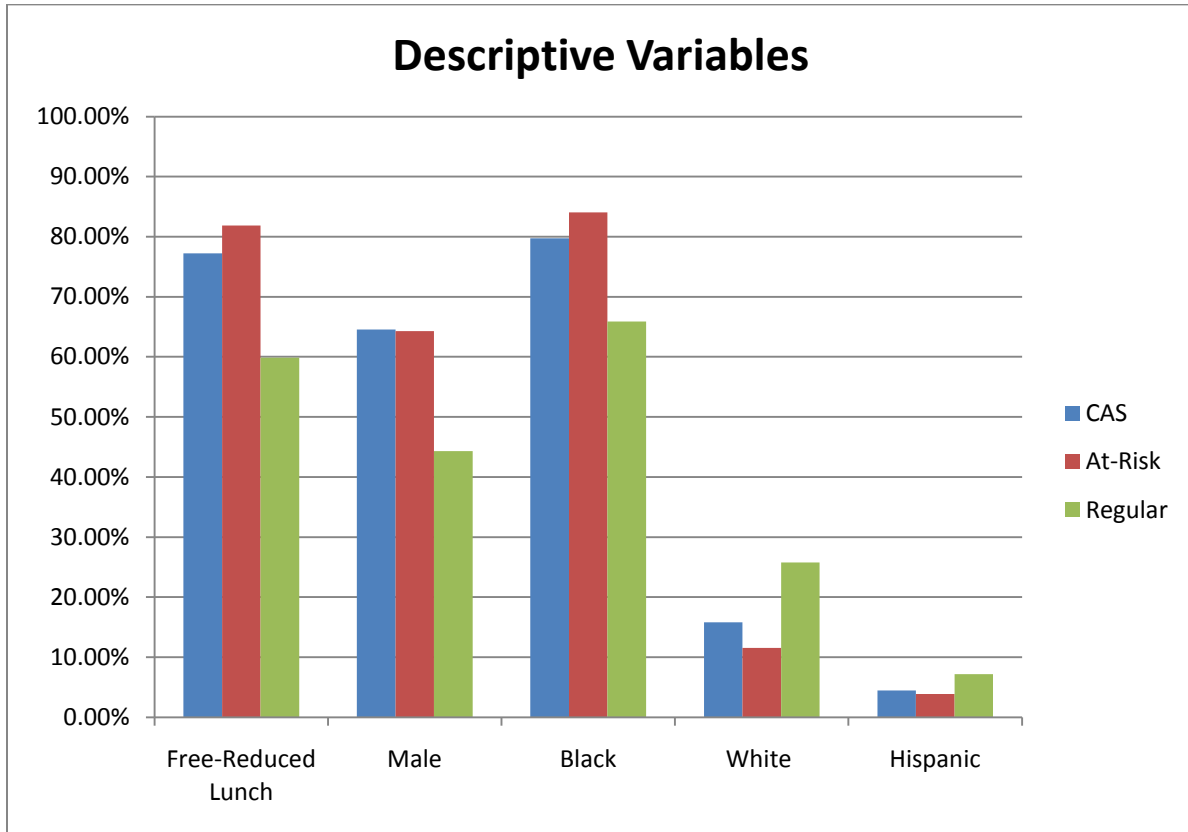


Figure 5

Descriptive Variables - Chart 1

**Center School District
Student Profile**

Report run date: Oct. 15, 2009

Name Joe Smith Grade 6 Case Manager/Advisor _____

Transfer in date Oct-09 504 IEP Title 1 ELL Gifted Flag

Retained no Original Grad Year 2015 Cohort Year 2015 Total credits earned

Student data: based on the previous four quarters:

Quarter	<u>2</u>	<u>3</u>	<u>4</u>	<u>1</u>	Annual Average
Year	<u>2008-09</u>	<u>2008-09</u>	<u>2008-09</u>	<u>2009-2010</u>	<u>2008-2009</u>
School	<u>Boone Elementary</u>	<u>Boone Elementary</u>	<u>Boone Elementary</u>	<u>Center Middle School</u>	<u>Boone Elementary</u>
% Attendance	<u>83%</u>	<u>90%</u>	<u>88%</u>	<u>75%</u>	<u>87%</u>
# of Tardies	<u>0</u>	<u>2</u>	<u>0</u>	<u>10</u>	<u>3</u>
# of Discipline referrals	<u>0</u>	<u>1</u>	<u>2</u>	<u>5</u>	<u>3</u>
# of days ISS	<u>0</u>	<u>0</u>	<u>2</u>	<u>7</u>	<u>2</u>
# of days OSS	<u>0</u>	<u>0</u>	<u>0</u>	<u>3</u>	<u>0</u>
Grade point average				<u>2.10</u>	
# of failing grades	<u>0</u>	<u>0</u>	<u>1</u>	<u>2</u>	<u>1</u>
Reading score	<u>2</u>	<u>2</u>	<u>3</u>	<u>2</u>	<u>3</u>
Math Benchmarks completed	<u>X</u>	<u>X</u>	<u>X</u>		<u>X</u>
Other					

Highlighted data is queried from IC

Figure 6

I-GAP - - - Individual Growth And Achievement Profile

Table 1
Educating the Outliers: Study Variables

Outcome variables:			
Grade Point Average:			
grade point average at data pt 1	4.0 gpa scale	gpa1	student level gpa score for the quarter designated as data point 1
grade point average at data pt 2	4.0 gpa scale	gpa2	student level gpa score for the quarter designated as data point 2
gains in grade point average	gpa2-gpa1	gpa_gains	the gain in gpa achieved between data point one and data point 2
Failing Grades			
number of failing grades at data pt 1	count of events	fgrades1	student level count of fgrades for the quarter at data point 1
number of failing grades at data pt 2	count of events	fgrades2	student level count of fgrades for the quarter at data point 2
gains in number of failing grades	fgrades2-fgrades1	fgrade_gains	the gain in fgrades between data point one and data point 2
Attendance			
% attendance at data pt 1	% of attendance	attend1	% attendance at the student level for the quarter at data point 1
% attendance at data pt 2	% of attendance	attend2	% attendance at the student level for the quarter at data point 2
gains in attendance	attend2-attend1	attend_gains	the gain in % attendance between data point one and data point 2
Tardies			
number of tardies at data pt 1	count of events	tardies1	student level count of tardies for the quarter at data point 1
number of tardies at data pt 2	count of events	tardies2	student level count of tardies for the quarter at data point 2
gains in number of tardies	tardies2-tardies1	tardies_gains	the gain in tardies between data point one and data point 2
Discipline Referrals			
number of discipline referrals at data pt 1	count of events	referrals1	student level count of referrals for the quarter at data point 1
number of discipline referrals at data pt 2	count of events	referrals2	student level count of referrals for the quarter at data point 2
gains in number of referrals	referrals2-referrals1	referral_gains	the gain in referrals between data point one and data point 2
In School Suspension			
number of days of In School Suspension	count of events	ISS1	student level count of days in ISS for the quarter at data point 1
number of days of In School Suspension	count of events	ISS2	student level count of dys in ISS for the quarter at data point 2
gains in number of days in ISS	ISS2-ISS1	ISS_gains	the gain in ISS days between data point one and data point 2
Final Record Drop-Out (not a gain score)			
drop out	drop-out	DO	any student with the final record of "drop-out"
continuing or graduating	not a drop-out	No DO	all other students
Independent variables:			
CAS (alternative school)	categorical	CAS	students referred from the regular school to

At-Risk (attending regular school)	categorical	Ar-risk	the alternative school and attending for at least two quarters
Regular school	categorical	Reg	students referred to the alternative school but did not attend random sample of students from the regular middle and high school
Dependent variables:			
Free or Reduced Lunch	categorical	ses	1=any student who qualifies for free or reduced lunch
gender	categorical	gender	1=male
grade	nominal	grade	grade of the student
age	nominal	age	age of the student
race	categorical	race_ethnicity	1=black, 2=white, 3=Hispanic, 4=Asian, 5=Indian

Table 2
Alternative School Research

Author	Year	Title	Notes:
P. Arter	2007	The Positive Alternative Learning Supports Program: Collaborating to Improve Student Success	The study focuses on positive behavior supports to impact behavior, academics, and attendance of 6th grade students as compared to a control group. 20 students were randomly assigned to either the intervention group or control group. The staff conducted functional behavior assessments on students through observation and data collection. Results showed significant effect on attendance and gpa. 47% of control group were retained as compared to 13% of the intervention group; No significant effect on discipline referrals or suspensions were seen.
A. Bauman	1998	Finding experts in unexpected places Learning from those who have failed	The author underscores the importance of relationships, and staff concerns for students's social and academic progress
T. Brown	2007	Lost & Turned Out Academic, Social, and Emotional Experiences of Students Excluded From School	The study examines 37 students who were suspended or expelled from school and then attended an alternative school. The analysis focuses on the loss of classroom instruction time and its implications for academic achievement and on socio-emotional experiences of students excluded from the educational mainstream. The study draws on survey data and the author's experience as a teacher to show how school exclusions have exacerbating results for students who are already.
T. A. Carpenter-Aeby, Victor	2009	Rewriting Family Stories During Successful Transition From an Alternative School: One Student's Story of "Violent Female" to "Phenomenal Woman"	Case study of one female alternative school student's struggle to stay in school.
E. J. Conner, Jan	2008	Drop-Out Challenges: Pathways to Success	Case studies best highlight success of the program reviewed but results also indicate that even with support, socioeconomic factors present fierce obstacles.
F. Z. D'Angelo, Robert	2009	The Twilight Academy: An Alternative Education Program That Works	The authors detail a program in a large urban district in Pennsylvania. They explain the philosophy behind the program, as well as its setup and successes. They also address: curriculum design, discipline issues and student-teacher relationships. Descriptive model.
P. De La Ossa	2005	"Hear My Voice:" Alternative High School Students' Perceptions and Implication for School Change	The author uses an inquiry approach to investigate students' perceptions about learning, knowing, and their school experience. Findings suggest that students are capable of providing valuable information and feedback to inform program policies. This study highlights 4 emerging themes: the positive effects of a small school, small classroom size, the positive impact of personal attention/relationships, and concerns expressed by the students regarding negative public perceptions of their school.
D. A. De La Rosa	1998	Why alternative education works	The success of alternative education is based on the staff involvement in the lives of the students
D. L. Duke and C. Perry	1978	Can alternative schools succeed where Benjamin Spock, Spiro Agnew, and B. F. Skinner have failed?	As a result of on-site observations and interviews with students and teachers, the authors concluded that discipline rarely was a major concern in the alternative schools. The reasons included small school size, flexible schedules, frequent informal interaction between students and teachers, and fewer rules.
M. Elgart	2007	One Size Doesn't Fit All	Author considers definition of success "Maybe we should take a lesson from the way parents measure their children's success. Their assessment is not based on one factor, but on their child's cumulative experiences in education, work and life."
A. Fairbrother	2008	"They Might Need a Little Extra Hand, you now": Latino Students in Programs	This study combined data from observations, interviews, and documents. The students appreciated the caring and support of the smaller communities however academic expectations were low and school work was remedial.

Table 2 continued
Alternative School Research

R. P. Foley, L	2006	Alternative Education Programs: Program & Student Characteristics	Data based on a survey completed by 50 principals/directors of alternative schools which collected data on descriptive program information. The questionnaire addressed six domains of interest; administration, students, program characteristics, program supports, instructional staff, and leadership
J. Y. S. Gates, Amy C	2006	Educational Options the New Tradition	A study of two administrators' findings, through admittedly unscientific reflections. Smaller settings are better for students. Standards-based instruction is important in order for students to move beyond high school successfully. Tailoring instruction for the individual works. Differentiated instructional strategies increase achievement."
J. Griffin	2995	Building Resiliency and Vocational Excellence (BRAVE_ Program: A Violence-Prevention and Role Model Program for Young, African American Males	This study reports on preliminary use of an intervention that incorporates mentoring (coaching, career planning, and re-definition of gender roles) to help young men develop a sense of purpose and future, and to manage their lifestyles effectively.
J. A. Grunbaum, S. Tortolero, N. Weller P. Gingiss	2000	Cultural, social, and intrapersonal factors associated with substance use among alternative high school students	The purpose of this study was to identify cultural, social, and intrapersonal factors associated with tobacco, alcohol, and illicit drug use among students attending dropout prevention/recovery high schools. In the final multivariate model low educational aspirations were significantly associated with cocaine use. This study demonstrates the importance of health education and health promotion programs for students attending alternative high schools which include prevention, as well as treatment.
E. B. Kaplan	1999	It's going good: Inner city Black and Latino adolescents" perceptions about achieving an education	Author evaluates one alternative school and finds that students felt that they were learning more in their alternative program than the regular education program
J. Kim, & Taylor, K	2008	Rethinking Alternative Education to Break the Cycle of Educational Inequality and Inequity	A qualitative study that found an alternative school provided caring environment and engaged student trust but did not provide meaningful and equitable education
C. A. L. Lehr, C.M.	2003	Alternative Schools and the Students They Serve: Perceptions of State Directors of Special Education	This study conducted interviews with 49 state directors of special education asking them to describe their perceptions of a)basic characteristics of alternative schools b)major issues for alternative schools c) major issues for state education agencies d) major issues for students with disabilities e)educational reforms impacting alternative schools
L. Loutzenheiser	2002	Being Seen and Heard: Listening to Young Women in Alternative Schools	Interview-based study examines nine young women's perspectives of their disconnection from high school and reconnection to school in an alternative program. The author presents theoretical constructions of student disconnection and connection, student testimony as one useful pedagogy, and policy implications for schools.
H. McCall	2003	When Successful Alternative Students "Disengage" From Regular School	This study addresses factors as perceived by students, parents, and educators that led alternative school students to drop out. The results suggested that drop outs were more likely to be students of color with low achievement scores who did not easily engage with school or pro-social peers. The researchers also found a discrepancy between the reasons educators gave for students dropping out as compared to students and parents. Positive staff-to-student relationships and individual attention were crucial to success.
E. D. McCarthy, Mary	2009	Mountain View Alternative High School	The author provides descriptions of two alternative school programs that utilize portfolio assessment

Table 2 continued
Alternative School Research

L. W. Mirsky, Ted	2007	The Worst School I've Ever Been To: Empirical Evaluations of a Restorative School and Treatment Milieu	This study of restorative alternative schools serving students with backgrounds of conflicts actually had safer climates than regular public schools. On pre-test and post-test measures, students made gains in pro-social values and self-esteem. There was also a significant reduction in re-offending.
J. S. Munoz	2004	The Social Construction of Alternative Education: Re-examining the Margins of Public Education for Chicano Students	Alternative education, while based on good intentions does not provide students with academic skills and critical thinking ability necessary to mitigate barriers to educational equity and social mobility. Case study method focusing on one of five opportunity schools for teen mothers in California
J. E. Nelson	2008	Education and Treatment of Children: A Service-Learning Model for Adolescents	This study describes a service-learning case study in a Disciplinary Alternative Education Program for secondary students. Includes specific recommendations for involving youth in the planning and then working collaboratively with them in the implementation of service orientated community projects.
J. U. Nichols, W	1998	An Alternative Learning Program: Effects on Student Motivation and Self-Esteem	This study showed significant positive effects on student motivation and self-esteem. Authors compared students who dropped out of the program to those who completed. Dropouts were significantly higher on extrinsic motivation and peer self esteem. Dropouts may be more effected by social issues and may be more influenced by peers outside of school
S. Poyrazli, L. Ferrer-Wreder, D. G. Meister, L. Forthun, J. D. Coatsworth and K. M. Grahame	2008	Academic achievement, employment, age and gender and students' experience of alternative school	The purpose of this cross-sectional study was to explore associations between academic achievement, employment, gender, and age in relation to students' sense of school membership and perception of adults in school. The sample consisted of survey results from 102 secondary, alternative school students. Results indicated that students with a more positive perception of school personnel also reported a greater sense of school membership.
M. M. P. Quinn, Jeffrey M. Faller, Susan E. Tonelson, Steven W.	2006	An Examination of School Climate in Effective Alternative Program	The author studies exemplary alternative programs in 3 racially and economically diverse communities to characterize the school climate as viewed by the students and the staff.
M. A. Raywid	1994	Alternative Schools: The State of the Art	A synthesis of research that seeks to provide support for the application of alternative models to regular education programs. "Despite a lack of "institutional legitimacy" alternative schools can serve as models for any school that seeks innovative change. Reforms that are found in alternative schools include: smaller size, theme based, school as community, empowering staff, active learner engagement, authentic assessments (p 26) The "Effective Schools" movement has sought reform through tightening and intensifying bureaucracy, while alternative schools pose an organizational alternative to bureaucracy
J. S. Saunders, E	2001	Alternative School Students' Perceptions of Past [Traditional] & Current [Alternative] School Environments	Student surveys reported that their alternative experience was significantly better than the school they left in both interactions with adults and the overall environment
D. C. Schussler, A	2006	An Empirical Exploration of the Who, What, and How of School Care	This study examines how care exists in one alternative high school for students. Data included observations, faculty interviews, and in-depth interviews with 16 students. Suggestions for how schools can organize to create a caring community are explored.

Table 2 continued

Alternative School Research

D. N. R. Sekayi		Intellectual Indignation: Getting at the Roots of Student Resistance in an Alternative High School Program	This study is the result of a yearlong examination of effectiveness of alternative high school education programs. This single site case study was approached phenomenologically. Data analysis revealed resistance as a major theme among students, particularly in the form of "intellectual indignation"
C. I. Somers, Owens, Delila, Piliawsky, Monte	2008	Individual & Social Factors Related to Urban African American Adolescents' School Performance	This study examines factors related to academic success of urban African American youth The study looked at five sources: parent, peer, teacher, classmate, close friend. Additionally, the authors looked at six educational attitudes and behaviors: educational intentions, educational behavior, personal control, persistence, and understanding of the personal & financial value of educational attainment. The parent role was most significant with peers second most significant. Social support was mildly correlated with better grades.
J. M. Stedman, R. M. Costello, T. Gaines, A. Villarreal, D. Abbott and C. Duross	1989	Achievement in an Alternative high school for Emotionally/Behaviorally Disturbed Students	Some 1,300 alternative high schools have been established in the United States for dealing with the special education needs of emotionally and behaviorally disturbed youth. The present study investigated cognitive, academic, and psychosocial variables associated with success in an alternative high school for such youth. Results indicated that psychosocial variables (Family Pathology, Duration of Disturbance, and Age of Admission) were associated with success, whereas cognitive and academic variables were not.
L. Thurston	2009	Find Your Voice, Shape Their Future	Author shares stories about students and her alternative program to build program support and legitimacy.
E. J. Trickett, J. B. McConahay, D. Phillips and M. A. Ginter	1985	Natural Experiments and the Educational Context: the Environment and Affects of an Alternative Inner-city Public School on Adolescents	The 1-year impact of attending a public alternative high school on two cohorts of adolescents who gained entrance to the school through a lottery was studied. Adolescents who had applied to the school but were not selected in the lottery served as a control group. The nature of the alternative high school environment is described, and the outcome of this natural experiment defined in terms of reactions to school, attitude change, and student achievement. In general, the alternative school positively affected student satisfaction with a variety of aspects of school life and induced some positive change in interracial attitudes while not harming student achievement.
J. Vadeboncoeur	2009	Spaces of Difference: The Contradictions of Alternative Educational Programs	"Alternative educational programs expose the tensions between a democratic ideal of engaging all young people in excellent and equitable public schools and a neo-liberal economic rationality that currently fuels the "sorting machine" function of compulsory schooling."
D. J. Wiest, E. H. Wong, J. M. Cervantes, L. Craik and D. A. Kreil	2001	Intrinsic motivation Among Regular, Special, and Alternative Education High School Students Journal: Adolescence	This study examined motivationally related variables among three types of high school students. In particular, students' perceptions of competence, control, parental autonomy support, teacher autonomy support, peer autonomy support, and academic coping were investigated. Two hundred fifty-one juniors and seniors (104 regular education, 93 alternative education, and 54 special education) from a large Southern California school district participated. Significant group differences were found on measures of perceived competence, academic coping, and parental autonomy support. Regular education and special education students reported that their parents were more involved in their lives as compared with alternative education students. The implications of these findings are discussed.

Table 2 continued

Alternative School Research

J. Wilkins	2008	School Characteristics That Influence Student Attendance: Experiences of Students in a School Avoidance Program	A study of four students who had previously refused to attend school willingly attended an alternative k-12 school for students with special needs. Themes that motivated students to attend emerged from student interviews: a) school climate b) academic environment c) discipline d) relationships with teachers
J. T. Williamson, K. & Fraser, B	1986	Use of Classroom & School Environment Scales in Evaluating Alternative High Schools	Students and teachers completed surveys on their perceptions of classroom environment. Generally analysis suggests that alternative high schools have been successful in fostering an environment or ethos which was more favorable than that prevalent in regular schools.

Table 3

Sample Growth Model vs. Threshold Model using Attendance Data

The table shows attendance data on 4 students in the 2006-2007 and 2007-2008 school years. Data is analyzed using a growth model and a threshold or proficiency model. The table demonstrates how the same data can be interpreted as success or failure depending on the assessment model used (growth or threshold)

	Percent attendance			
	2006-2007	2007-2008	Growth Model	Threshold Model Proficiency = 94%*
Student #1	65%	85%	+20%	Not-proficient
Student #2	50%	70%	+20%	Not-proficient
Student #3	98%	95%	-3%	Proficient
Student #4	0 (dropout)	52%	+52%	Not-proficient
Average Attendance	Average attendance = 53.5%	Average attendance = 75.5%	Net gain of 89% pts Average gain = 22.5%	25% of the students are proficient

*Threshold is set by state attendance standard.

Table 4**Outcome Variable: Gains in GPA**

	Model I			Model II		
	Coef	Std Err		Coef	Std Err	
Initial GPA	-0.515	(.049)	***	-0.540	(.052)	***
CAS Alternative School	-0.044	(.131)		-0.015	(.133)	
At-risk (in regular school)	-1.082	(-105)	***	-1.050	(.109)	***
Free/Reduced Lunch				-0.019	(.094)	
Gender				-0.036	(.080)	
Age				-0.044	(.048)	
Grade				0.030	(.051)	
White				0.121	(.106)	
Hispanic				0.172	(.177)	
Asian				0.457	(.622)	
American Indian				1.705	(.868)	
Constant (regular student in regular school)	1.250	(.142)	***	1.705	(.497)	***

Table 5

Outcome Variable: Gains in Number of Failing Grades

	Model I			Model II		
	Coef	Std Err		Coef	Std Err	
Initial Failing Grades	-0.824	(.043)	***	-.826	-.043	***
CAS Alternative School	0.307	(.307)	*	0.180	(.179)	
At-risk (in regular school)	2.021	(.161)	***	1.922	(.160)	***
Free/Reduced Lunch				0.238	(.152)	
Gender				0.014	(.131)	
Age				0.172	(.077)	**
Grade				-0.145	(.083)	*
White				-0.069	(.173)	
Hispanic				0.308	(.289)	
Asian				-0.096	(1.018)	
American Indian				-0.977	(1.423)	
Constant (regular student in regular school)	0.357	(.111)	***	-1.176	(.711)	*

Table 6

Outcome Variable: Attendance Gains

	Model I			Model II		
	Coef	Std Err		Coef	Std Err	
Initial Attendance	-0.755	(0.049)	***	-0.784	(0.049)	***
CAS Alternative School	-4.035	(1.244)	***	-3.870	(1.295)	***
At-risk (in regular school)	-6.310	(1.152)	***	-6.369	(1.211)	***
Free/Reduced Lunch				-4.238	(1.132)	***
Gender				2.856	(.974)	***
Age				-0.548	(.572)	
Grade				-0.115	(.622)	
White				-2.274	(1.289)	*
Hispanic				-2.399	(2.150)	
Asian				1.445	(7.583)	
American Indian				8.384	(10.590)	
Constant (regular student in regular school)	71.227	(4.724)	***	85.913	(7.451)	***

Table 7

Outcome Variable: Gains in Tardies

	Model I			Model II		
	Coef	Std Err		Coef	Std Err	
Initial Tardies	-0.688	(0.05)	***	-0.714	(0.051)	***
CAS Alternative School	4.420	(.733)	***	3.913	(.767)	***
At-risk (in regular school)	2.988	(.723)	***	2.296	(.751)	***
Free/Reduced Lunch				1.619	(.692)	**
Gender				-0.741	(.599)	
Age				0.632	(.350)	*
Grade				-0.722	(.381)	*
White				-1.503	(.797)	*
Hispanic				-0.517	1.312)	
Asian				-1.560	(4.647)	
American Indian				11.406	(6.499)	*
Constant (regular student and regular school)	3.168	(.537)	***	-0.107	(3.245)	

Table 8

Outcome Variable: Referral Gains						
	Model I			Model II		
	Coef	Std Err		Coef	Std Err	
Initial Referrals	-0.941	(0.054)	***	-0.944	(0.535)	***
CAS Alternative School	1.306	(.224)	***	1.295	(.235)	***
At-risk (in regular school)	-0.731	(.214)	***	0.755	(.226)	***
Free/Reduced Lunch				0.317	(.207)	
Gender				0.070	(.178)	
Age				-0.177	(.105)	*
Grade				0.236	(.114)	**
White				0.307	(.236)	
Hispanic				-0.200	(.393)	
Asian				-0.281	1.387)	
American Indian				-0.099	(1.930)	
Constant (regular student in regular school)	-0.553	(.152)	***	-0.840	(.968)	

Table 9**Outcome Variable: In-School Suspension Gains**

	Model I			Model II		
	Coef	Std Err		Coef	Std Err	
Initial In School Suspension	-0.823	(0.06)	***	-0.866	(0.06)	***
CAS Alternative School	1.426	(.202)	***	1.443	(.208)	***
At-risk (in regular school)	0.568	(.192)	***	0.376	((.199)	*
Free/Reduced Lunch				0.335	(.186)	*
Gender				-0.065	(.159)	
Age				-0.118	(.094)	
Grade				-0.090	(.102)	
White				-0.434	(.212)	*
Hispanic				-0.645	(.352)	
Asian				-0.686	(1.241)	
American Indian				1.738	(1.735)	
Constant (regular student in regular school)	0.345	(.137)	**	3.157	(.867)	***

Table 10

Outcome Variable: Final Record Drop-Out						
	Model I			Model II		
	Odds Ratio	Std Err		Coef	Std Err	
Final record Drop-out						
CAS Alternative School	10.027	(10.63)	**	8.692	(9.392)	**
At-risk (in regular school)	19.35	(19.967)	***	20.998	(22.062)	***
Free/Reduced Lunch				0.975	(0.465)	
Gender				0.995	(0.415)	
Age				1.418	(0.332)	
Grade				0.874	(0.222)	
Race				1.551	(0.435)	